

DISTRIBUTION & WAREHOUSING

FORMERLY
TRANSFER & STORAGE

Vol. XIX, No. 4

U. P. C. Building, 239 W. 39th St.
New York, N. Y.

April, 1920

BUSH TERMINAL

One of the World's largest centers of shipping, storing and distributing; more than two million square feet of storage space; a dependable labor market; over thirty miles of railroad trackage joining every important railroad—all these are as much at your disposal as if you, yourself, controlled them. Let us tell you how little it costs to employ these facilities.

BUSH TERMINAL COMPANY
100 Broad Street, New York, N. Y.





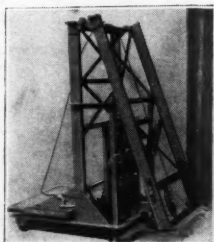
Make Your Waste-Space Pay!

A Brown-Portable "Hand-I-lift" will permit you to stack goods right up to the ceiling, where no piling gang could ever get. It makes that waste-space **pay!**

You can make a big cut in your labor cost with a "Hand-I-lift"—two men with a "B-P" can do the work of from four to six men without it, and save you from fifty to seventy-five per cent on non-profit-producing labor cost.

The "Hand-I-lift" takes up but little room, and unloads easily from three sides—it is not necessary to turn it around.

The hinged upright frame allows it to pass through low doorways—easy-rolling wheels make light work of the trucking of heavy loads—and special feet make skidding while unloading impossible.



Showing how the frame may be made to fold back so as to pass through doorways or on to elevators. Note height compared to doorway.

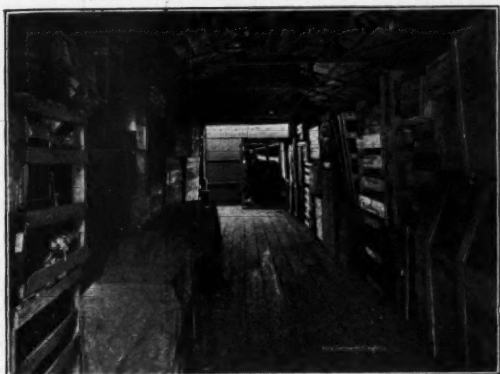
We will gladly send Bulletin D-38 upon your request. Entails no obligation on your part.

BROWN - PORTABLE
HAND-I-LIFT
"LOWERS THE COST OF LIFTING."

Brown Portable Conveying Machinery Co.

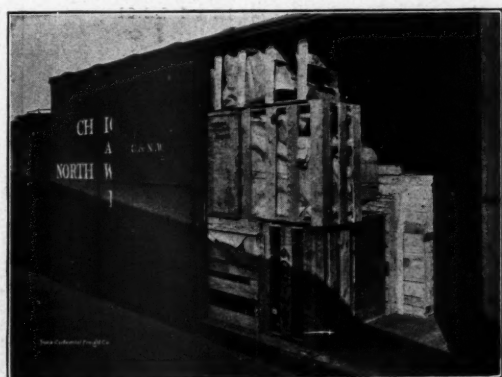
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What Trans-Continental Freight Company Service Means

TO Household Goods Shippers, Trans-Continental Freight Co. Service means a service standard based on two decades of study, effort and large practical experience, coupled with an assured volume of traffic which insures prompt shipment. Briefly the advantages of this service are described in three words—*Safety, Saving and Satisfaction*—while the detail advantages are given in the column to the right.



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- B** **RIGHT LOADING**—Clean, carefully inspected cars, especially built for the accommodation of furniture, used exclusively, and every method employed has been proved best by the acid test of actual experience.
- C** **THROUGH CARS**—Cars loaded by this company are consigned direct from our loading stations to all principal centers West of the Missouri River, and the Southwest.
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- F** **DELAYS SAVED**—Just as our assured volume of traffic saves you money, so it also saves delay and enables us to load and ship goods promptly.
- G** **DAMAGES MINIMIZED**—Experienced handling, expert loading, careful inspection assuring the non-acceptance of goods of an unclean nature and the possibility of shipments leaving our warehouse insufficiently packed, are factors which minimize damages.

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Consolidators of Household Goods, Machinery, Automobiles and Pianos and General Merchandise for Export

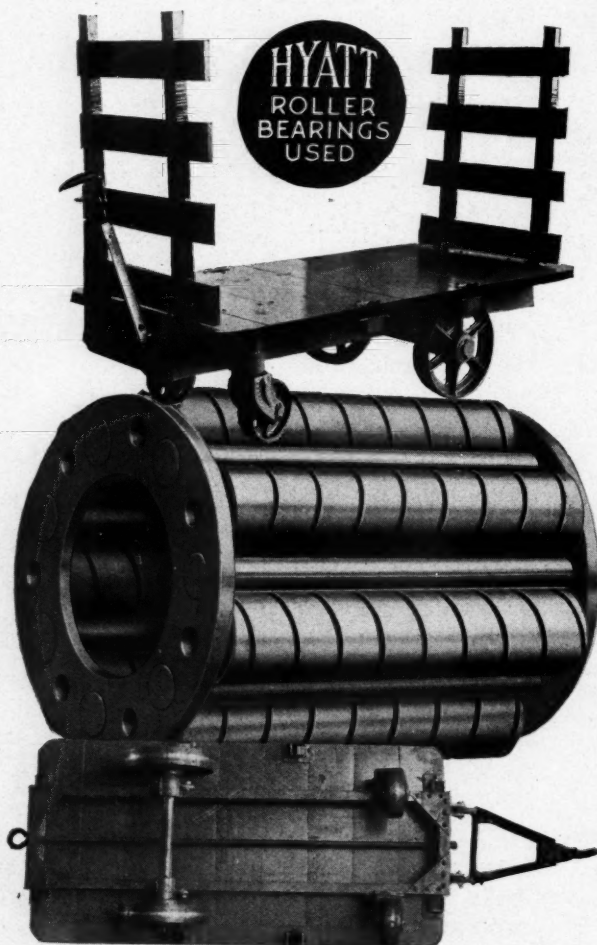
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Better trucks are designed and built to carry heavy loads quickly, easily and constantly for years with minimum attention for lubrication and maintenance. Better trucks have Hyatt Roller Bearings in all four wheels.

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HYATT BEARINGS FOR FREIGHT HOUSE TRUCKS

DISTRIBUTION & WAREHOUSING

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Chicago.....446 Marquette Bldg.	St. Louis.....1537 Boatmen's Bank Bldg.
New York.....324 Whitehall Bldg.	New Orleans.....203 Marine Bank Bldg.
Boston.....640 Old South Bldg.	San Francisco.....64 Pine Street
Philadelphia.....272 Drexel Bldg.	Los Angeles.....517 Central Bldg.
Baltimore.....412 Garrett Bldg.	Seattle.....402 Arctic Bldg.
Pittsburgh.....437 Oliver Bldg.	
Detroit.....527 Ford Bldg.	



For Love or Money

A Doctor recently moved to Los Angeles. He left his goods in storage in his old home town, thinking that he would sell them and buy furniture in California.

We quote a sentence in a letter which we have just received from the Doctor:

"Am writing you with reference to a car to ship our furniture out here. You can't buy furniture here for love or money. It is scarcer than diamonds."

Which reminds us of our old slogan:

Ship and Save

or

Sell and Sacrifice

Truer now than ever.

Of course the way to ship is via

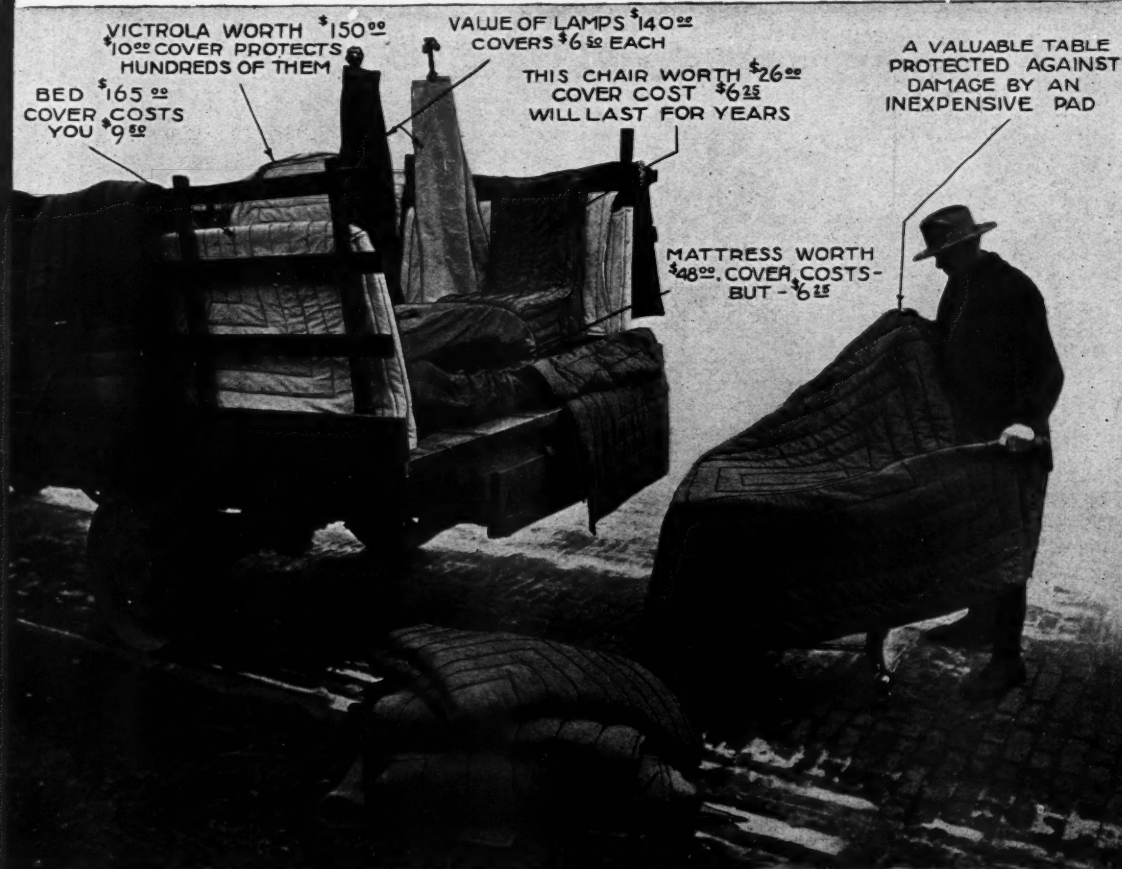
JUDSON

For information write nearest office

**Judson Freight
Forwarding Co.**

Compare the Small Cost of "Quality" Pads With the Value of Absolute Protection to Furniture

It Relieves You of Liability for Damage
Is Much Appreciated by Your Customers



Filling, covering thread and workmanship are best that money can buy. Stitching four inches apart prevents filling from bunching or packing. Hem turned so that filler is securely held on all edges. Filler is high grade, one piece jute and cotton batt. Every pad inspected before leaving factory. Materials—white, slate, khaki drill.

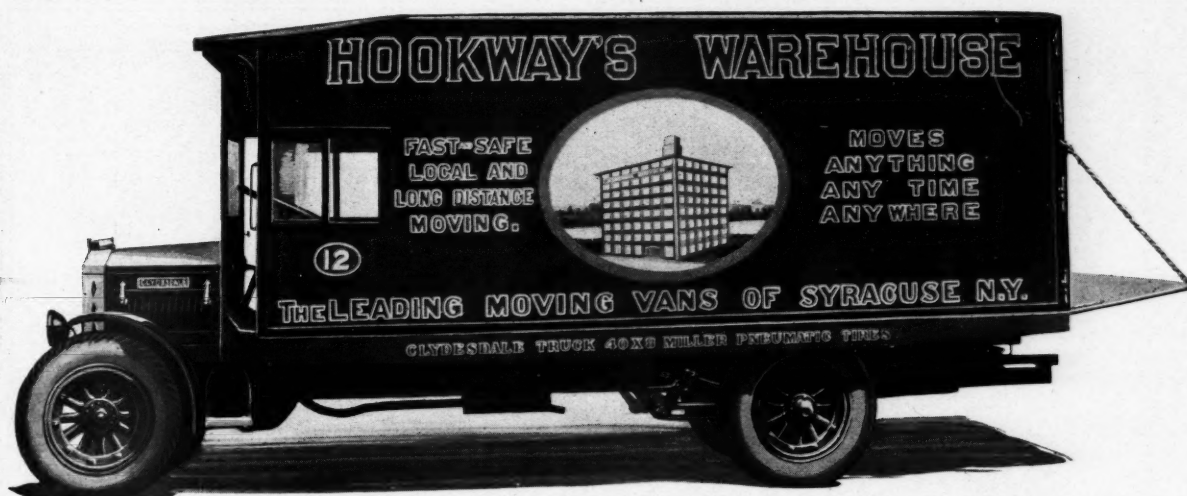
Read What This Customer Thinks of "Quality" Pads

We thought you might be interested in knowing that we have *laundered* the furniture pads we purchased from you and that results are very satisfactory.

This certainly speaks well for the "inside quality" as well as the outside appearance of your pads.

Thomas Furniture Co.
Pontiac, Mich.

THE TOLEDO CANVAS PAD CO.
Toledo, Ohio



FOR THE LONG HAUL

PARTICULARLY in long distance hauling, where heavy loads and exacting conditions of service are the rule, does the exceptionally sound design and construction of Clydesdale show to real advantage.

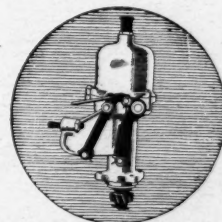
For wherever the wear comes, Clydesdale is amply prepared to fight it—with the skill that nine years of constant truck building have given its creators.

It is this experience, easily seen in the precise and painstaking character of Clydesdale manufacture, that makes this truck a favorite among those engaged in the strenuous business of long distance hauling—the most gruelling service a truck is called upon to perform.

Experienced buyers know that Clydesdale is built with the single purpose in view of resisting the pummeling certain in constant, severe duty.

The greater the task, the better Clydesdale shows to advantage.

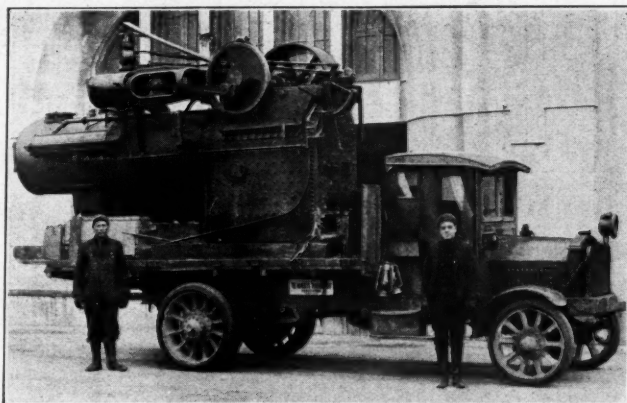
One to Five Tons Net Load



No Other Truck Has It
"The Driver Under the Hood"

THE CLYDESDALE MOTOR TRUCK COMPANY, CLYDE, OHIO

CLYDESDALE



Federal 5-ton truck—one of the 9 Federals owned and operated by Harrison Bros., Toledo, Ohio—hauling a boiler weighing 16,200 pounds from Dunkirk to Toledo, Ohio—a distance of 70 miles.

Another

FEDERAL

"Our Federal Is Always Ready"

"Whenever we have a difficult job, like hauling this big boiler," said one of the Harrison Brothers, Toledo, Ohio, "we use one of our Federal trucks. We never have to worry about them—they're always ready to go."

That's the big thing that has tied the Federal truck so closely and consistently to the transfer and haulage business—"Federals are always ready to go." In all weathers, on any job, in any place, Federals give the same carefree, dependable service that truck men have come to expect of them. The Federal has a man's size dislike for a repair shop and an unusual ability to maintain a high attendance record on the job.

"Traffic News"—an interesting magazine of haulage sent free on request.

FEDERAL MOTOR TRUCK COMPANY
24 FEDERAL STREET DETROIT, MICH.



This is the sign of the 10th year Federal—a sign significant of ten years' success in every field of truck transportation.

"Shorten the Miles to Market—Use Motor Trucks"

DISTRIBUTION & WAREHOUSING

ENTERED AS SECOND CLASS MAT-
TER, JANUARY 29, 1916, AT THE POST

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Volume XIX

NEW YORK, APRIL, 1920

No. 4

DISTRIBUTORS' CONVENTION

The Place: Chicago

The Time: May {Dates to be
Selected }

The Purpose:

ORGANIZATION OF A NATIONAL ASSOCIATION

If You Handle Warehouse Accounts as

Distribution Manager

Transfer Manager

Traffic Manager

Sales Manager

Freight Forwarder

You Are Eligible To Membership

By

KENT B. STILES

EVERY man who handles the warehouse accounts of the manufacturer who distributes merchandise through warehouses, and every freight forwarder and shipper of any kind who utilizes warehouses, is eligible to membership in a national association which is soon to be organized.

A convention will be held in Chicago on dates yet to be selected—probably in May.

Manufacturers and forwarders who have relations with the warehouse industry will send representatives from all parts of the country.

The general object of organizing is to develop standardization of relations between manufacturers and forwarders on the one side and warehouse executives on the other.

The movement has the support of representatives and officers of the following companies:

Furniture Manufacturers' Association, Grand Rapids, Mich.
 F. F. Dalley Corporations, Ltd., Hamilton, Ontario, Canada.
 Keystone Steel & Wire Company, Peoria, Illinois.
 Hoosier Manufacturing Company, New Castle, Ind.
 Acme Transfer and Storage Company, St. Louis and New York.
 Vick Chemical Company, Greensboro, N. C.
 P. W. Drackett & Sons Company, Cincinnati.
 James B. Sipe & Company, Pittsburgh.

Other manufacturing companies and forwarders have evinced a lively interest in the plan, and purpose to have representatives at the Chicago convention. These companies include a number which are nationally known.

The American Warehousemen's Association and the American Chain of Warehouses each has indicated its active willingness to co-operate with the new association, and the Central Warehousemen's Club also will welcome its existence. This means that the shippers have in advance the support of a large majority of merchandise warehousemen in the United States and Canada.

The prospective membership list for the new association contains the names of thousands of manufacturers and forwarders. Direct invitations to these interests to identify themselves with the movement are being sent, explaining in detail the origin of the idea, the purposes of the organization, and the plan for co-operation with the warehouse industry.

No name for the association will be selected until the Chicago convention. Several have been suggested, among them being:

National Distributors' Traffic Association
 Shippers and Distributors' Association
 National Manufacturers' and Distributors' Association

National Association of Distribution Managers
 Shippers' Distributing and Warehouse League
 Shippers' Conference Committee on Distribution and Warehousing

Origin of Movement

THE plan had its inception at the 1919 convention of the American Warehousemen's Association, at Cincinnati, in December. In conjunction with that meeting there was for the first time in the country's industrial history a co-operative conference between representatives of the warehouse industry and traffic representatives of manufacturing companies and freight forwarders who use warehouses.

Traffic managers, sales managers, managers of transfer departments, distribution managers and officers of forwarding companies, went to Cincinnati to discuss with the warehousemen the controversies which for years have been mutual and the settlement of which had never been undertaken before in any organized way.

Both to the traffic representatives and to the warehousemen this conference was a revelation. While it disclosed that there was a common meeting ground on which the two sides could get together, if a permanent organization of manufacturers' representatives should be organized, there was revealed also that to an amazing extent there was need for constructive effort toward standardization of relations between shippers and storage executives.

Discussions at the Cincinnati convention showed that the two parties were unable to reach any agreement on many of the most simple fundamentals in relationship. The discussions proved that desired

reforms could be effected only through a process of conciliation to be matured through the strengthening of that relationship on a basis of future co-operation.

After the shippers' representatives had conferred with the warehousemen they held a meeting of their own and organized an advisory committee for the purpose of planning a national association in 1920. On this advisory body are the following:

Chairman, Frank E. Jones, traffic manager, Furniture Manufacturers' Association, Grand Rapids, Mich.

John J. Sinnott, traffic manager, F. F. Dalley Corporations, Ltd. (shoe polish manufacturers), Hamilton Ontario, Canada.

John Simon, manager of transfer department, Keystone Steel & Wire Company, Peoria, Illinois.

C. V. Wake, traffic manager, Hoosier Manufacturing Company (kitchen cabinets), New Castle, Indiana.

Herbert N. McEwen, vice-president, Acme Transfer and Storage Company, St. Louis, Missouri.

Thomas A. Bradley, president, Acme Transfer and Storage Company, New York City, N. Y.

C. G. Yates, traffic manager, Vick Chemical Company, Greensboro, North Carolina.

H. B. Rubey, traffic manager, P. W. Drackett & Sons Company (washing soda), Cincinnati, Ohio.

E. Stanley Grant, traffic and distribution manager, James B. Sipe & Company (oils and paint specialties), Pittsburgh, Pennsylvania.

Other companies which had their traffic representatives present at the Cincinnati meeting included: Colgate & Company, Jersey City.

Procter & Gamble Company, Cincinnati.
 Indian Packing Company, Chicago.
 Postum Cereal Company, Cincinnati.
 Whitaker Paper Company, Cincinnati.

At the convention of the Central Warehousemen's Club at Kansas City, in January, Mr. Simon and Mr. McEwen, of the advisory committee, were present and outlined the purposes of the organization.

Purposes of Organization

Briefly, these include the following:

1. Simplification and standardization of warehouses' rates and bills.
2. Agreements as to what service warehouses are expected to perform. (For instance, do their regular rates include making a daily report or a monthly report, or what? Do these rates include prompt delivery? Do they include handling a responsible amount of correspondence promptly?)
3. Discussion as to whether warehousemen should act more or less as sales agents.
4. Annual opportunity for shippers' representatives to meet jointly with the members of the American Warehousemen's Association and the American Chain of Warehouses, which hold conventions during the same week and at the same city.
5. Standardization of stock reports, bills of lading, manifests, etc.
6. Understandings with warehousemen as to "flat rate" service—whether warehousemen should make separate charges for stenciling, clerical expenses, postage, stock reports, bills of lading and other documents. (Traffic managers generally object to the common warehousing practice of itemizing individual assessments.)
7. Co-operation with the American Warehousemen's Association's Pittsburgh Central Bureau which is to be made a clearing house for information which shippers desire regarding tariffs and other warehousing conditions in various communities.
8. Agreement on how warehousemen should handle unloading reports, outbound freight charges, freight extensions, damage claims, shortages in consigned goods.

9. Agreement on warehousemen's liability in event of fire, theft, etc. What is warehousemen's responsibility in relation to insurance of shippers' goods.
10. Encouragement, by manufacturers, of better service by warehousemen in handling carload and c. l. c. shipments.

These are only a few of the fundamentals where reforms are necessary.

It is essential for manufacturers to know that at this time the warehouse industry is making an exhaustive and intelligent study of cost accounting and that the effect of this campaign will be in effect higher rates charged by the warehousemen. To quote the words of one of the traffic managers at Cincinnati:

"There must be no prohibitive rates charged by warehousemen. By organizing we can serve as a check on the storage men. If we have a strong organization we can serve our own interests, work harmoniously, standardize practices, and make it a fifty-fifty proposition with the warehousemen. The warehousemen can, and will, standardize 80 per cent. of their practices if they have standardized forms submitted to them by a traffic managers' organization. The warehousemen will adjust their business to meet our demands. If the warehousemen get fair prices, and get them uniformly, their facilities to handle distribution will be increased 100 per cent. The warehousemen must be told of the necessity of adjusting their business to meet traffic managers' demands or they will lose our patronage."

Plans for Co-operation with American Warehousemen's Association

AT Cincinnati the presence of the traffic managers was solicited in advance and welcomed at the convention. The tentative plans for an association of manufacturers' representatives who handle warehouse accounts was approved by the officers of the A. W. A., and there was discussion as to whether such an association should be an independent one or become affiliated with the A. W. A. as a sub-division.

The consensus of opinion on both sides was that the shippers' body should function independently.

The A. W. A. desires, for mutual betterment of all concerned, an organization of manufacturers' representatives and will co-operate with it, as will the

American Chain of Warehouses, at conventions. The attitude of the A. W. A. is expressed in the following message which James F. Keenan, of Pittsburgh, president, has authorized this committee to convey to prospective members of the proposed organization:

"I have been informed by those actively identified with the American Warehousemen's Association that this movement, in their opinion, is one of the best things ever attempted to help the warehousing industry, and I believe others will agree with this statement."

And George S. Lovejoy, of Boston, vice-president

(Concluded on page 18)

Are You

Reactionary or Progressive? A Standpatter or a Live Wire?

Have you won the confidence of the banker from whom you would borrow?

Have you studied the distribution facilities in your territory?

Have you sold yourself to the manufacturer?

Are you wasting profit-earning space?

Do you study competitors' methods?

Have you eliminated fire hazards?

Do you use labor saving devices?

Do you study traffic conditions?

Is your plant properly located?

Do you advertise intelligently?

Whether your answer is "Yes" or "No" to any one of these questions, it will repay you many times over to read the series of articles which Charles H. Moores, warehouse engineer, has written exclusively for

Distribution & Warehousing

The first of these, "The Merchandise Warehouse," begins on the opposite page. The others will be published during the coming months. In their completed form they will be equivalent to an interpretation of present-day conditions in the warehouse industry. They will point the finger of common-sense counsel in the direction of the industry's logical development.

The Warehouseman who Wants to Grow Will Watch for These Articles and, after Reading Them, He Will Preserve Them

TRAFFIC AND DISTRIBUTION MANAGERS
WILL FIND THESE ARTICLES INFORMATIVE

The Merchandise Warehouse*

by

CHARLES H. MOORES

(Of Moores & Dunford, Warehouse Engineers)

THE cave or shelter hut of the primitive savage is the parent of the present warehouse.

His natural instinct and budding reason led him to store during the harvest season—the time of plenty—for the use of his family in winter. As the families united into tribes, certain families stored more than others, and trading began. As the tribes lost their mutual distrust, commerce—transportation with trade—finally developed.

The warehousing idea grew and improved with civilization and the trading or so-called business interests of man have advanced through the succeeding centuries. Nevertheless, up to the Twentieth Century there was comparatively little scientific development of the warehouse in design, handling equipment or adaptation to the needs of the producer in his distribution problem, especially in the choice of central points in the various districts of the country.

The congested condition of distribution, brought to light during the war, has forced the warehouseman to extend his business and has taught him that to hold his business he must install modern improvements. The merchandise or distributing branch of the warehouse business has never been developed other than in a few of the largest cities. *Sixty per cent of the men operating so-called merchandise warehouses are unaware of the great possibilities of a modern distributing warehouse with its numerous service departments and their real value to the producer, the importer and the people of their district; nor do they comprehend their economic relations with the credit and banking systems of this country.*

It is true that a number of modern warehouses have been built in the last few years. Investigation will show that few of them are modern, so far as layout or equipment are concerned, and very little if any trained organization for distributing service is maintained. You will find that most of such warehouses have been erected by jobbers and manufacturers at points of production or import, or in districts where their product is distributed.

These conditions have required a greater investment of capital by the producers or jobbers than in most cases should have been necessary, although required by them in order to serve their customers, and, through them, the public.

This method of distributing their products was forced on them by the lack of public warehouses, and in a still greater measure by the lack of efficient service provided by those which were in operation.

The results obtained are of an unsatisfactory nature and at an expense far greater than would be required for the same or better service provided by

a modern merchandise and distributing warehouse. If it were a fact that such space and efficient distributing service were available, millions of dollars of manufacturing capital that could be used to much better advantage in expansion of plants and increase of production would be released.

Since the World War, much interest in the warehouse situation has been displayed by the Government, the railroads, Chambers of Commerce and business men. A great deal has been said about the utter lack of distributing facilities, and many unfamiliar with manufacturing industries and warehouse operations of the past say that times have changed and we must rearrange our business systems to meet the new conditions.

This is not a fact, however. Conditions, so far as warehousing and distribution are concerned, have not altered. The sudden awakening of the producer together with the voicing of demand for distributing warehouses at points of distribution, is nothing new. The same demand has been here for years, but the warehousemen have not met it.

The producer and the general public became aware of the situation only after the searchlight of Government inquiry, due to war necessities rather than to far-sighted interest, had been turned on it, exposing the facts that we had no real merchandise warehouse systems, that the manufacturer and distributor were shipping in small or less than carload lots, and that the wholesaler and retailer were holding cars at destination, paying demurrage for the privilege of using them as warehouses.

The congestion due to this antiquated method of warehousing and distribution caused the Railroad Administration much grief during the first year after the entry of this country into the European war, and the Government found it necessary to issue instructions to unload whole trainloads of merchandise into fields without protection in order to release rolling stock. Drastic as this action was, it did not relieve the condition to any great extent.

Accumulation of carload lots at interior points and the accumulation of merchandise for cargo shipment abroad were impossible with the facilities at hand.

Even with the commandeering of all available building at intermediate points, the facilities were inadequate for Army purposes, to say nothing of serving the general public.

This condition has been given much publicity and the warehouseman, the banker and the business interests are now awake to the situation and will arise to meet it.

The next few years will see great developments in

* (Copyright, 1920, by Charles H. Moores)

modern warehousing and distribution, and the proprietor or operator of a non-fireproof warehouse with equipment able to give little or no service will soon be a thing of the past. If he is alive and willing to be progressive he will reorganize his business, build modern warehouses and develop an organization that can give real service.

On the other hand, if he is satisfied to remain in the same old rut, operating along the same old lackadaisical non-service line, he will sooner or later be absorbed or forced out of business by modern competition.

Many warehousemen give little thought to the situation other than to sell warehouse space in any old building that can be secured at the cheapest rental or lowest possible purchase price regardless of its antiquated design or dilapidated condition. Generally buildings that are useless for any other purpose and rented cheaply for that reason are made use of. Apparent bargains of this kind are often found to be serious problems, inasmuch as the warehouseman sooner or later finds that the rent paid plus the cost of operation is more, for the actual space available for storage purposes, than his competitor pays for the same available space in a modern building with its lower operating costs.

This is doubly true since the high cost of labor came into effect.

Small Returns Deplored

In one sense it is regrettable that the returns on the cheaper class of storage in antiquated, non-fireproof warehouses are satisfactory remuneration to some warehousemen. They are unaware of the injustice they are doing to progressive warehousemen, retail merchants, and the people of their district, as well as the producers, by not developing their opportunity. They do not seem to have any ambition to improve their condition, until some progressive warehouseman from another city or some live business man builds a modern house that can and will give the required service. Then it is usually too late to retrieve the lost opportunity, inasmuch as the new enterprise has been carefully developed, all plans for the design, construction, operation and advertising campaign having been completed before the project is made public. In many instances, accounts have been contracted for in advance, even for some that the local warehouseman is at that time handling.

Financial Aid

The recognition of real worth, earning power and the necessity of modern merchandise and distributing warehouses by the banks and financial interests will make it possible for deserving and progressive warehousemen with good-going businesses now operating non-fireproof and inefficient warehouses, to secure financial assistance to erect modern and properly designed buildings and to procure the necessary equipment.

The Government is awake to the vital necessity; the people, the banks and the producers must have them to better their economic conditions.

This is the warehouseman's opportunity.

From the warehouseman's point of view, it pre-

sents the greatest opportunity in the last decade—one of developing a small warehouse business into a high-class commercial enterprise.

There are thousands of manufacturers in this country looking in vain for the proper kind of service and the chance to get their product on the market in your district.

The manufacturer, the producer and the importer demand modern fireproof storage space that will give them the lowest possible rate of insurance and a warehouse organization that is thoroughly responsible morally and financially, preferably one with banking connections where negotiable receipts may be used as collateral and accepted by bankers without hesitation due to the type of warehouse and the integrity of the management.

Efficiency

While this first qualification is of vital importance, there is a still further qualification necessary to the successful operation of a distributing warehouse.

That is SERVICE.

Service in all branches that the producer can depend upon.

Much development is necessary to bring the average warehouse business up to an efficient standard. Therefore careful study of modern designs of warehouse layouts, mechanical handling equipment and systematic methods of operation of the various departments, is necessary if the warehouseman hopes to compete in this modern development in warehousing and distribution.

He must have warehouses that are modern and fireproof, so equipped and managed that the producer can consign to him merchandise in carload lots for storage, with full confidence in the warehouseman's ability to give him prompt and satisfactory service in the distribution of his product; reshipping or delivering by motor truck on order in small lots to the manufacturer's customers in that district.

Judgment in Design

The development of a warehouse business requires more than telling your local architect or engineer that you want a building of so many square feet of floor space and four walls, leaving it to his understanding and ability to produce an economical warehouse. In most cases the local architect or engineer has had little or no knowledge or experience in warehouse development. It is true they have built loft buildings, but a loft building is not a warehouse. If the design of such a structure you should use the same sound judgment to protect your business interests as you do your family. If a member of your family is seriously ill do you secure the services of a novice or of a specialist to give him the proper medical treatment?

Your warehouse business is sick; therefore the same sound judgment should be employed in the design of your warehouse. Engineers who are thoroughly conversant with the most modern designs of merchandise warehouses in all districts of this country as well as abroad and who have made a special study of the warehouse business, its requirements and methods of operation, should be retained to design your buildings and to aid you in the selection

of the proper handling equipment. Only by this method can you hope to have for a finished product a highly efficient modern warehouse.

You have a territory of 10,000 square miles or more to which you can distribute from your warehouse. Many manufacturers and producers are not distributing in your territory, not because there is no sale for their products, but due to the fact that they have no intimate knowledge of the territory or conditions.

Have You "Sold" the Shipper?

In getting into communication with them, explain to them the service you can render. Describe your warehouse and distributing facilities. Tell them about your territory, the number of people that you can serve from your warehouse as a distributing center. Give them some information about the number of stores and the possible demand for their product. In other words, *sell them on your district the same as any other business enterprise would do.* Organize and put into operation a motor truck department or distributing service by motor truck and tell them about it. Let them know the difference between motor-truck delivery and re-shipment by railroad to local points. Mention the day's time saved in delivery to their customers. Bring forth the fact of satisfied customers and the lack of grief in the transaction.

You will find that if this method is employed your business will increase by leaps and bounds.

If you have decided that new building and new methods are necessary, the first step is a systematic survey of the possibilities of the warehouse business in the city in which the warehouse is to be located, carefully going over all commodities received and making a list of the shippers, together with an approximation of the tonnage that is handled for distribution directly in your city; looking well into the less than carload shipments made from and received by local wholesale and retail merchants; then carefully investigating the surrounding district to which the producer can distribute from your warehouse.

Often the area within a radius of 150 miles or more will use your warehouse as a distributing point.

Know Your Territory!

A survey of the entire district should be made to ascertain the full possibilities, carefully listing the various small towns, the number of stores and the population.

It has been called to the writer's attention a number of times that cities with a population of 25,000 are found to be the distributing centers for an area of 10,000 square miles with a population of over 300,000.

For instance, Mason City, Iowa, has a population of perhaps 26,000 and is within easy trucking cartage distance of nearly 350,000 people.

Such an investigation will probably show, much to your surprise, that many producers ship their products to the nearest large center where warehouse facilities can be secured and distribute them from there to your city and district, much to the disadvantage of your local merchants in freight rates and service. This is made necessary by the lack of proper warehouse and distributing facilities in your city.

Only after such an investigation has been care-

fully made, either by your own organization or by engineers thoroughly conversant with warehousing and distribution, are you in a position to know definitely the type and size of warehouse that will fill the demand. You are then also in a position to know or you have a good idea of the commodities that will be handled. This means much in the design of a warehouse and the selection of handling devices.

The requirements of no two cities or districts are exactly alike, and often the mistake is made of duplicating a warehouse plant in another city. The warehouseman, much to his regret, soon finds that the new building does not fill the requirements. This would not have occurred if he had made a systematic investigation of the conditions.

Unit Construction

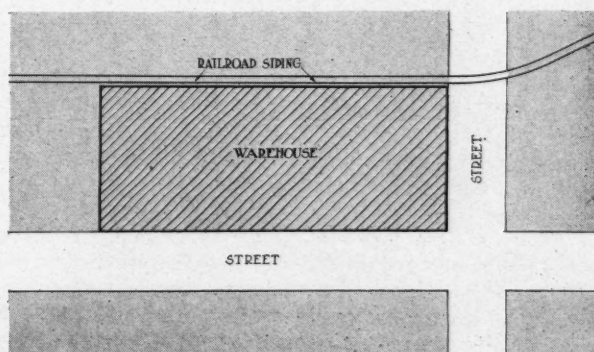
In this preliminary work due consideration must be given the fact that much of the business will not be given you until you have proved to the producer and the storing public that you can and will give the proper service as well as modern warehouse space. Therefore, in many cases, the warehouse should not be built to cover the maximum findings of the investigation, but designed and built in units, so that after the first unit is filled and the demand sufficient, the second unit may be built, and then the third.

After the survey has been satisfactorily completed and the ultimate size of the warehouse decided upon, the next step is to secure a satisfactory location or site.

As much careful thought should be used in the selection of the site as on the preliminary survey. The general lay of the land, size and width and street frontage as well as track facilities, have much to do with the efficient operation of a warehouse. Irregular lots work out to a disadvantage, whereas an oblong lot, preferably a corner property, with streets on the front and one side, and a side track possibly along the other side, as shown on the accompanying sketch, is ideal.

It is true that it is difficult to find locations of this kind that have the other necessary qualifications or that are within easy access and also are within short cartage distance from the wholesale and retail districts.

One of the most vital points and one next in importance to railroad facilities is that the warehouse



*Suggested as an ideal location for a warehouse site.
The right spot means right profits*

be located on good hard or paved streets. Otherwise, your cartage and distribution will be costly and at times impossible.

Computing Earning Power

After the location has been selected and acquired, preliminary drawings of the new warehouse should be prepared by competent engineers, showing all units of the proposed building—a complete layout of the new plant. These drawings, while preliminary, should indicate the superstructure, general layout and handling devices, together with indications of the available space and office layouts.

After preliminary plans have been prepared, illustrations of the exterior and interior of the buildings should be furnished. When the plans and illustrations are completed, a detailed report, setting forth the entire findings of the investigation, should be prepared, using the drawings and illustrations to make plain the full description of the design and the operation of the warehouse as shown, tabulating the space available for storage and the rate of charge that will be used, computing from this the earning power of the new building, using the space available and the prices given as the basis, and deducting a reasonable amount of space for a constant vacancy. Also a close estimate of the cost of the land, buildings, equipment and operating expenses should be made and incorporated in this report.

Winning the Banker's Confidence

With a report of this kind in hand, you and your associates or your board of directors are in a position intelligently to pass upon the amount of improvements that shall be made. You have also in your possession a document that your banker will understand, inasmuch as it contains facts and figures logically set forth, and you will find that *you will have little difficulty in interesting outside capital or your banker to get the necessary building loan or additional capital to complete the improvements.*

Such a report will show that your arrangements have been completed only after a careful study of the entire situation has been made, and will be an argument in your favor in the eyes of the banker. Also, it will indicate that the management of the new warehouse will be in safe hands.

You will succeed in obtaining the necessary funds while an equally deserving project may fail entirely. This will be due to the fact that the warehouseman who is your competitor has not given the conditions the proper thought and has not gone into the possibilities in a systematic manner; he has also failed to present the most attractive features in an understandable way, showing that he has not studied the situation, and perhaps will indicate to the banker a lack of ability to handle a project as large as he contemplates.

After satisfactory financial arrangements have been made, the thought should then be turned to design and construction. As previously stated, if experienced warehouse engineers have not already been employed in the preparation of the preliminary drawings, by all means obtain the services of such engineers on the final design. An engineer who has been

trained in the proper manner, who has studied scientific methods of operation of a warehouse, is best qualified to serve you.

The growth of a highly efficient warehouse can be favorably compared with that of the skillfully designed automatic machine. Only when the progress of engineering skill makes possible a completely mechanically operated warehouse, so far as the handling of commodities in and out is concerned, will we have the finished product in the warehouse. The development of a warehouse may be likened to the improvement of the machine from the first crude product of a foot- or man-power lathe, advancing step by step to the power stage, the semi-automatic, and finally to the direct motor-driven automatic machine.

The Age of the Specialist

So with the warehouse. From the poor shelter stage with man as the beast of burden to the non-fireproof house with hand elevator service and crude trucks; then to the specially designed fireproof warehouse with power elevators and efficient trucks; and then to the present-day modern fireproof warehouse with the first attempt at mechanical handling devices and tiering machines which will pass on in the future to more scientific designs with automatic loading and unloading devices and perfected handling equipment, bringing the warehouse nearer and nearer to the finished product, giving the highest type of public service. Therefore the design of the modern warehouse is essentially the work of highly trained engineers who are specialists, and the greatest care should be utilized in the choice of design of your building.

Economy of Flat Slab

The design of the superstructure should have first consideration. If the engineer is experienced in warehouse design, the spacing of columns and type of floor construction will be chosen that will be best adapted to the warehouse business. The writer has found that the flat slab type of construction is most economical both in cost and operation, giving the least lost space and offering no beams or girders to interfere with the piling of the merchandise. This type of construction also presents a much better appearance and is easier to sprinkle, if sprinkling equipment is desired. Care, however, should be taken in the choice of contractors or builders, to employ only those who are familiar with flat slab construction.

As the design progresses, the floor plan should be laid out to a large scale in order that the general arrangements of aisles, storage space, handling equipment and stairs may be carefully studied. This work should be done only by one familiar with the actual operation of a warehouse—who can visualize just how this particular warehouse, which he is designing, will operate. Often days of study are required before the layout is completed to the satisfaction of the owner and the engineer.

Particular attention should be paid to the lost space or amount on each floor that is given to aisles, elevators, etc. *It should be borne in mind that the main revenues of a warehouse come from the sale of space,*

and that each foot of lost space is the loss to its owner of so many dollars and cents each year.

Lost Space Means Lost Profits

With the layout arranged, the column spacing and ceiling heights will then be determined. It is the writer's experience that from 9 feet 6 inches to 10 feet in the clear is the most economical story height for a modern merchandise warehouse. If sprinkler equipment is installed, then additional height must be given to allow for the sprinkler equipment. There is also a most economical column spacing as far as construction cost and piling of goods are concerned. This can be determined only after the size of building is known.

In the design of the building, *utmost caution should be taken to make the structure as a whole conform to the requirements of the Board of Fire Underwriters' Code.* All stair wells, elevator shafts and mechanical handling equipment should be enclosed and all doors leading into them or between compartments should bear the Board of Underwriters' label and have automatic closing devices. All windows on exposed sides should be of metal sash with wire glass and bear the same label. To obtain the lowest possible insurance rate on contents, the building should be equipped with an automatic sprinkler system. In the northern portion of the country, where a long period of cold weather is experienced, it is better to install the dry system; otherwise it will be necessary to heat the entire building both day and night, and if, due to negligence on the part of your fireman, the fire should go out and the sprinkler system freeze, the damage both to the equipment and the contents of the warehouse would be great.

From an underwriter's point of view it is desirous to have the floors so designed that they will slope slightly at the end of all aisles so that in case of fire or the accidental discharge of a sprinkler head, the sloping of the floor would carry the water to the wall and out through the scupper holes, not permitting it to flow from floor to floor, by running down stair well or elevator shaft to other floors.

Laying Out the First Floor

Standpipe connection for the steamer in the front of the building should also be installed and lengths of hose properly distributed so that any portion of any floor could be reached in case of failure of the automatic sprinkler system or water mains. By this method the city engine can pump directly into your water supply and standpipe.

In the layout of the first floor, the level chosen should be one that will bring the floor to the same level as the floor of a freight car on the side track and as nearly as possible to the level of a wagon or truck at the delivery or wagon dock. Care should also be taken to have the proper number of shipping doors both for wagon dock and for sidetrack facilities, as well as the proper amount of handling equipment, the kind and amount of which is directly dependent upon the floor space and the commodities handled. They should be laid out and chosen only after figures of these requirements have been determined upon. Much depends upon the proper capacities.

Oiling the Small Cogs

There are also a number of important minor details, such as house telephone connections, lighting, heating, shower baths and lunch room for employees, layout of offices, equipment of offices, etc., that must be given careful consideration. While the minor details seem to be simple, all have their functions to perform, and the successful operation of the whole depends on each unit or detail fitting smoothly into the completed machine.

While the plans and specifications are being prepared, the real work of the management starts. It is apparent that it is necessary to have an organization that will be as modern and efficient in the new work as the new warehouse. Earnest thought must be given each separate department; some of the work may be new to your business.

As much information as possible should be obtained on warehouse systems now in operation in some of the more modern establishments of the large cities, either by your organization direct, or through a maintenance engineer familiar with warehouse operation. The better parts of the several good systems should be selected and only such chosen as apply directly to your conditions.

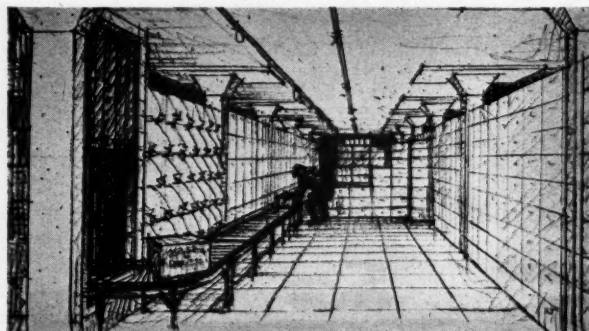
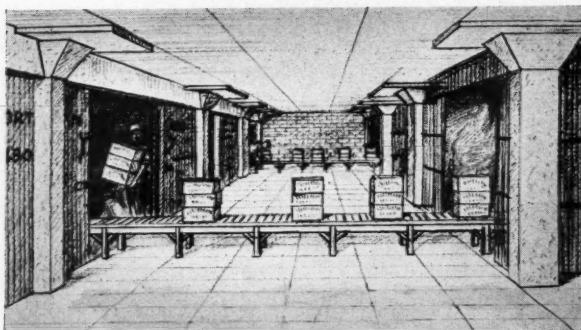
The Aisle Space

In the study of the storage problem due consideration must be given the fact that in a merchandise and distributing warehouse the bulk of the business will be in carload lots of fast moving commodities. Therefore the arrangement of clerical force and track facilities should be completed with this in mind. Also the layout of floor space should be arranged accordingly. In most of the smaller warehouses where small lots are the rule, the warehouseman is in the habit of storing from ten to fifteen feet deep, thus losing in aisle space, as this requires two main aisles in addition to the cross aisles in a building from 50 to 60 feet wide; while with merchandise in carload lots and particularly fast moving commodities only one aisle is necessary, as the commodity can be stored in space from 20 to 40 feet deep, dependent upon the sizes of the lots.

Many really efficient warehouses are failures so far as large earnings and service are concerned, entirely due to inefficient systems and lack of proper handling equipment. The manager or warehouse superintendent should give each shipment consideration before it is stored. Fast moving commodities should have space where they can be handled quickly and at the least possible handling cost. Heavy and bulky merchandise or machinery hard to move should be stored on the first floor, when possible, in space where the commodity will require least handling when it is to be removed.

Too Little Thought to Handling

A careful study of the better way of handling and the best places to store the different commodities will not only greatly increase your service but also greatly strengthen the right side of your ledger. Too little thought has been given the handling of merchandise. The majority of warehousemen are prone



Eliminate "the strong back and the weak head" methods in your warehouse. By this conveyor system goods are moved from freight car to elevator and, at an upper floor, from elevator to pile. Why let labor costs eat into your profits?

to let well enough alone and stick to the old "strong back and weak head" methods. The recent rapid rise in the wage scale of the laborer will prove a blessing in disguise to many, for it will force them to turn their attention to mechanical handling devices. The very manufacturer whom they now serve has long ago discarded the old method of handling this commodity and is now using mechanical handling equipment to move the very same merchandise which they are trucking by man-power and say cannot be accomplished with mechanical equipment.

A little thought and investigation along this particular line, combined with the services of engineers who are qualified to advise, would be a paying investment to many warehouses and develop not only quicker and better service but greatly reduce the labor cost of handling merchandise in and out of the warehouse.

To-day in some of the more modern warehouses the merchandise is checked out of the car, and at the car door placed directly on a conveyor, which will carry it by gravity without power to a specially designed tray elevator, to which it is automatically transferred without man-power or attention and raised to the floor where it is to be stored. There, again, it is automatically taken off or discharged on to a receiving table, or, if desired, automatically delivered at the floor to another gravity conveyor that will carry it to the pile to be stacked.

It is obvious that such an arrangement will handle carload lots of merchandise more quickly and efficiently by eliminating trucking and labor. This, it will be seen, greatly increases the profit of the warehouseman, inasmuch as the handling charge of merchandise in and out of the house usually is equal to a month's storage charge. The accompanying two illustrations show first, a gravity conveyor handling merchandise from the car directly to a tray elevator, and then the tray elevator discharging on to a gravity conveyor that carries the commodity to the pile. This is standard equipment and can be obtained at any one of the several manufacturers of conveyors. Eighty per cent of the commodities stored in the average warehouse can be handled by this equipment if properly installed.

This equipment can also be used in the same efficient manner to lower and transport merchandise from the various floors above to the freight car for

reshipment or to the wagon dock for distribution or delivery.

Provide Ample Truck Space

One of the gravest mistakes usually made in the design of a warehouse is to provide inadequate dock space for motor truck or wagon deliveries. The writer has often found trucks that have had to wait from one to two hours to discharge or receive a load. This is a direct loss of money if the trucks belong to you and a decided loss of good nature, with a possible loss of business, if they belong to your customer.

Investigation shows that this congestion and delay are often due to old trucking methods of handling merchandise, and inadequate elevators or conveyors. Such conditions are costly in any business and every effort to avoid this unsatisfactory arrangement should be made in the design of a new building or in the remodeling of an old one. With the proper handling devices such as those described, a small shipping space or wagon dock will handle a surprisingly large volume of merchandise, doing it at a very low cost; and, what is more, you will have satisfied customers.

A majority of the warehousemen of to-day have little or no knowledge of traffic requirements or tariff rates, and the important part that they play in a well-organized warehouse business. Many have spent the greater portion of their lives in small houses and still use the antiquated methods and systems of their forefathers that are in no way applicable to modern warehouse operation. *The management of every modern and efficient establishment should include on its staff a superintendent or shipping clerk thoroughly conversant with traffic conditions and tariff rates.*

An advertising campaign should also be started for new business to fill the house. Most warehousemen overlook the fact that there are several thousand producers in this country, few of whom have any accurate knowledge of your district. Many would become good customers if a full description of the possibilities and inducements offered were given them, together with a good working knowledge of your warehouse and distributing facilities. This data will be available to you from your preliminary survey and may be added to by data compiled by your local Chamber of Commerce.

What to Tell the Distributor

It is not sufficient to write the manufacturers giving the storage facilities you have and soliciting their business. This does not give them any information relative to your district or offer inducement for investigation. In writing, give as much information as you can relative to the possibilities and field for their product; tell them about your warehouse facilities and the services you can offer in distributing by rail, motor truck and reconsignment. Such a campaign should fill the warehouse almost before it is completed, and will cost very little.

It is not the amount of advertising you do that pays, but the way you do it and the reaching of the right people. As your advertising campaign proceeds there will be innumerable requests for rates for storage and distribution. At this point, good business judgment must be used and plenty of self-esteem will be profitable. In establishing your rates, bear in mind that yours is not the rate of the old non-fire-proof non-service warehouse, but the rate of modern storage space with modern service—service that will be second to none—also remembering that the American business man pays for service; warehousing means little to him—but warehousing plus service talks money. Therefore, space plus service equals price or rate you will receive, and this is directly dependent upon the type of service you can give.

Belong!

If you are a member of one of the various warehousemen's associations, get their package and square foot rate for merchandise storage and their rate of charge for handling and distribution. If you are not a member, become affiliated with one. In the East and Central States, the American Warehousemen's Association should be attractive. In the West and Central West, the Central Warehousemen's Club will be of great benefit to you.

Find out what your brother warehousemen are charging for modern storage, handling charges and distribution. Be sure when you get their rates that they are a modern service organization with a high type of building. You will find that the progressive warehousemen are making separate charges for the following:

Package rate or square foot rate by the month with a minimum charge of one month.

Charge for handling the commodity in and out of the warehouse.

Handling for reshipping or delivery of merchandise that does not go into the warehouse for storage.

Negotiable warehouse receipts.

All cartage.

Handling of accounts.

Display space and sales department.

Negotiations of loans on warehouse receipts.

In view of the above a special scale of charges should be compiled and the rates for the new business established, bearing in mind that it is much easier to get a right and satisfactory price at the start than it is to raise the price after the business is established.

Also have no fear of not filling the warehouse and

above all do not take cheap accounts just to fill the building.

Remember that a warehouse half full at full price is more profitable than a building filled at half price.

Be sure to get off on the right foot.

Ask your engineer.

He knows the price and what the other warehousemen are getting; if he does not, you have employed the wrong engineer.

As you start to book space for the new warehouse, study the commodities; become familiar with the sizes and weights; visualize their handling and determine methods of piling and handling in and out.

Much of the success of the warehouse depends upon the knowledge of the management of the commodities handled and its ability to take care of the storage quickly and at the least expense.

"Know Your Business!"

Keep in close touch with your business.

Become familiar with the fast moving accounts.

Locate and pile them to advantage so that the vacant space may be used from day to day as the commodities go out.

Make it a part of your business to become a part of the machine—not just the "boss." If you will do this, the time will soon come when you can "let George do it," so to speak; but not until you can teach "George," and you cannot do that until you know yourself.

Be careful.

Do not let "George" teach you; otherwise it will come about that you will do it instead of "George."

As the construction work proceeds and the building is finished and ready for occupancy, care must be taken to see that it is thoroughly dry before the period for storage begins.

This is a very simple matter and requires only a few salamanders burning on each floor for a few days with the windows open. This method will expand the air and carry out the moisture.

Once the building is dry it will stay so.

As soon as the operation of the warehouse starts, *your men should be taught the proper use of the handling devices.*

Do not be discouraged if they do not get the results at once.

It is up to you to see that they do.

They perhaps will not take kindly to them at the start and would much prefer going back to the old methods of hand trucking.

That is human nature, but as soon as they see the real value you will have no further difficulty.

Even they, when they start to compare the difference between trucking a carload of canned goods from the freight car and lifting it to the fourth floor to pile it, will see the advantage of the new way over the old.

With the first or old method, with either two or four wheeled truck, the merchandise is loaded on the truck and two men pull or push it to the elevator, standing there until the elevator is brought to the floor.

The truck is then pulled on to the elevator and the men ride up to the fourth floor, pull the truck off the

elevator and down the aisle to the pile where it is to be stacked.

Usually this is done leisurely and without supervision. The men then walk back, pulling the empty truck to the elevator, perhaps resting awhile and telling a story before they ring the bell, wait for the elevator to come up, ride down to the first floor and pull the truck to the shipping platform and car for another load. What percentage of their time is used in actually handling the merchandise and what percentage is used in lost motion?

Compare the conditions with conveyors and automatic handling equipment.

A checker checks the commodity out of the car and laborers place it on the gravity conveyor which carries it without power directly to the automatic tray elevator, where it is picked up without manpower, raised to the required floor and taken off automatically. It can be, if you choose, carried by another gravity conveyor to the pile, eliminating all trucking; and what is more, the men piling have to work as fast as the men at the car or they would be covered.

There is no lost motion here and this by far is the most economical and quickest way to handle merchandise.

After once it has been seen, it is not hard to determine the proper method of handling.

Remember your payroll and that you receive the same handling charge regardless of whether the commodity is handled by men or machinery. Therefore, in the final analysis, the success, earning power and service you give depend much upon the good judgment of yourself and your engineer in properly equipping your warehouse.

The points brought up are equally of value to the

man with a fireproof but poorly equipped warehouse that can be altered with a little expense, as they are to the man who expects to build. They will greatly increase the efficiency and earning power.

The writer during the fall of the year 1919 and also this winter visited many cities and gathered much first-hand information relative to the present-day methods of operation in the different localities of the country.

He found a rather general lack of co-operation among the warehousemen of many districts. Co-operation rather than distrust is the rule to-day. The writer strongly advises affiliation with associations of warehousemen.

In some sections the lack of warehouse facilities is deplorable and the knowledge of systematic modern warehousing and distribution is practically *nil*. In some of the more isolated districts, the warehousemen have very little idea of or hardly any information on accounting systems, the paper work necessary to the successful operation of warehouses, modern methods of storing and universal negotiable warehouse receipts.

It is very much to the interest of all warehousemen to cultivate the acquaintance of such firms as may assist in modernizing their businesses, bringing their operating systems and business policies up to the standard of the best.

In most cities there is much to be done along this line and this can be accomplished only through the good work of warehouse associations, either local city associations or State, and the helping hand of the modern warehousemen with a little consideration for their less fortunate competition will do much to standardize the business.

(Watch for other articles by Mr. Moores)

DISTRIBUTORS' CONVENTION

(Concluded from page 9)

of the A. W. A., and one of the leading merchandise warehousemen in the country, writes to the committee:

"I have received a great many comments from the warehousemen throughout the country, stating what a good thing this movement was, and I have received calls from a number of traffic managers at my office and they have spoken of the matter in the same way, and I know it will lead to a better understanding between warehousemen and their customers. I thoroughly believe in co-operation, where it is done from a straightforward standpoint, and I feel that the traffic managers can accomplish by co-operation just what the warehousemen have in the last few years in their line of business."

Conclusion

IT is not the thought of the advisory committee that the new organization would in any way conflict with the activities of the National Industrial Traffic League.

The membership of the proposed body would be confined exclusively to shippers' representatives who handle warehouse accounts. It is, indeed, conceivable that there would be many ways in which the two organizations could work in co-operation, as in the matter of railroad freight conditions, but with the proposed body dealing with the phases which concern relations with warehouses.

It is essential that the advisory committee know in advance how many manufacturers and forwarders desire to be represented at the Chicago Convention. Letters of support and inquiry should be addressed to Mr. Jones, care of the Furniture Manufacturers' Association of Grand Rapids, Mich., or to the editor of *Distribution & Warehousing*.

NOW TURN TO PAGE 34

and read what a traffic manager and a warehouseman have to say about some of YOUR problems.

The Science of

*Knowing Your Business
and Your Profits Is*

COST ACCOUNTING

*Others Are Making Money on Handling—
Are YOU?*

THE introduction of scientific methods of cost finding into the business systems of some of the largest merchandise warehouses in the New York metropolitan district is a definite step forward in the growth of warehousing, an industry which is to-day in its infancy.

Through the Port of New York Warehousemen's Bureau of Information, guesswork as to the costs of handling the commodities which pass through these warehouses is to be eliminated. This will mean revised schedules of revenue obtained. It will assure profits that, while fair to the shipper, are commensurate with the services performed, taking into account the expenditures which must be made to finance the labor necessary for handling goods in and out of warehouses from and to cars, trucks, lighters and piers.

The end sought is nothing more or less than a fair profit. The cost accounting systems introduced will enable these warehousemen each to determine exactly what tariffs to fix in order to obtain that profit.

The storage executives are of the opinion that no shipper will begrudge a warehouseman a profit that is fair. Through the cost finding methods, all danger of charging unfair and excessive rates will be removed. Haphazard ways of fixing tariffs will be something of the past, and the manufacturers who distribute through warehouses will be beneficiaries of this reform.

For months to come the eyes of the storage industry will be trained

upon the work which is being done through the Port of New York Warehousemen's Bureau of Information. This is so because results which will be important to the industry's prosperity and development are to be passed along to warehousing communities elsewhere for their guidance.

This is to be accomplished through the instrumentality of the Central Bureau, the clearing house for information that has been established at Pittsburgh by the



A tripartite pledge

American Warehousemen's Association.

As explained in *Distribution & Warehousing*, March issue, cost accounting is to be the keynote of a campaign to be conducted among storage executives generally by the national organization. What warehousemen in Massachusetts and Rhode Island accomplished in cost finding as the pioneers in the movement, was the basis of propaganda which has been spread to New York and several other territories, and eventually every warehousing community of any size will be organized to carry on the inquiries for the mutual benefit of all. The trend is unmistakably in that direction, and the neces-

sary co-operation has been stimulated by the knowledge that in New England, and now in New York, all warehousemen who have taken up cost accounting have discovered that it more than pays for itself.

Ten of the large merchandise warehouses in New York recently put into use a series of standardized cost accounting forms, and reports from these have already begun to come in at the office of H. I. Jacobson, certified public accountant, who is manager of the Port of New York Warehousemen's Bureau of Information. These reports are analyzed and filed, and the information to be derived from them will eventually be placed in possession of Charles L. Criss, in charge of the Central Bureau at Pittsburgh, and Mr. Criss will pass it on to warehousemen elsewhere.

Under the New York system of cost finding, five forms are in use. These are illustrated on pages 20 and 21. Briefly, commodities handled are first entered on Form A or on both Form A and Form B, depending on whether goods are re-handled between the time they enter and leave the warehouse; from Form A and Form B the entries are carried on to Form C; thence to Form D; and totals from all Forms D are entered on Form E, which shows the combined totals of given commodities that have been handled by the New York warehousemen. It is a summary of the Forms E—individual sheets for individual commodities—which will go to the Central Bureau in Pittsburgh.

Form E[illegible]

To Form C are carried, from Form A and Form B, the totals, which are placed under the "Receiving and Tiering" section of Form C.

When the coffee is delivered to car or truck or lighter or pier, the proper entries intended to show the man-hours required, are placed on a Form A sheet, and transferral is made to the same Form C to which the receiving and tiering totals have meanwhile been taken.

Form D, the "Cumulative Handling Cost Record," now receives the combined totals in the "receiving and tiering" and "delivering" sections of Form C. These entries may show that, in the process of handling the 300 bag shipment of coffee into and out of the warehouse, a total of eighty man-hours was required. That is, eighty hours of labor were necessary for the handling of 600 bags (300 bags in and 300 bags out). Form D is designed for recording the labor of given commodities, so that twenty separate lots of coffee may be en-

tered on Form D in a month's time, the total each month to be carried over to Form E.

Assume that the average payroll cost for labor in handling commodities through New York merchandise warehouses is 66 2/3 cents per hour. On eighty hours this amounts to \$53.33. Allowing 150 per cent for overhead, a figure which will be found to be very conservative in New York distributing warehouses, this then amounts to \$133.33. Allowing, finally, 10 per cent for profit, the total cost for handling 600 bags of coffee is found to be \$146.66, or roughly 25 cents per bag.

The value of finding costs is emphasized when it is stated that New York warehousemen once handled coffee at an average of two cents a bag. They were losing money and did not know it.

charge covered the labor payroll, then it might be true that a quick turnover would mean additional income, due to more advantageous use of space; but where labor is furnished at a loss, as it still is in many warehousing communities, the total received during the first month is insufficient to cover the labor cost, leaving no revenue at all from storage and resulting in the apparent absurdity of a quick turnover producing a great loss.

<i>Study</i>	<i>Know</i>
<i>Cost</i>	<i>Your</i>
<i>Accounting</i>	<i>Business</i>

Traffic Club a Clearing House

GRAND RAPIDS, MICH., March 22—The Grand Rapids Traffic Club has undertaken to make itself hereafter a clearing house for the transportation affairs of its members. In making known the plans to-day, Ernest L. Ewing, president, announced special committees would soon be appointed to consider subjects such as bills of lading, claims, classification and rates and tariffs, demurrage and storage, switching and terminals, etc. In the first of a series of bulletins to members, Mr. Ewing said:

"All the conditions of the past five years, combined with the present and rapidly increasing necessity for adequate and dependable transportation service, underlie the shipping problems that must be solved by the united efforts of shippers and carriers if commercial disaster is to be averted." He declared also that "transportation is of world importance, and every individual having anything to

New Storage Co. in Colorado Springs

COLORADO SPRINGS, March 20—The Pikes Peak Warehousing Company has been incorporated for \$100,000 and has begun erection of a modern fireproof warehouse to have 25,000 square feet of floor space in the first unit, the completed building to have 75,000 square feet. The warehouse will have A. T. & S. F. and Colorado & Southern and other trackage connections. The new company takes over the entire business of the Pikes Peak Transfer & Storage Company, together with that concern's fireproof warehouse with 25,000 square feet. The completed plant will be in operation probably by September. The officers of the new company are Frank M. Fletcher, president; H. C. Harmon, vice-president, and E. H. Ross, secretary.

Canadian Convention in April

WINNIPEG, March 5—The third annual convention of the Canadian Warehousemen's Association will be held here on April 15, 16 and 17. Roy F. Wrigley of Vancouver, secretary of the organization, announces that addresses will be delivered by fourteen leading transfer and storage men on subjects relating to the general merchandise, household goods and cold storage branches of the industry. Montreal, Toronto, Chicago, St. Paul, Minneapolis, Vancouver, Seattle and the Prairie cities will be represented.

To Build Addition

COLUMBUS, OHIO, March 23—A permit has been taken out for the erection of a large addition to the warehouse of the Fireproof Warehouse & Storage Co. at 1024 North High Street. The contract calls for five stories and the foundation is being built. The estimated cost is \$40,000.

WAREHOUSE REPORTS

by

E. STANLEY GRANT

Traffic and Distribution Manager,
James B. Sipe & Co., Pittsburgh, Pa.

THIS is the story of how a manufacturing company has stopped knocking warehouses and has worked out a solution of the problem of obtaining satisfactory reports from the distributing warehouses which are scattered from the Atlantic to the Pacific. We do not claim that this method can be applied to all lines of stored goods, but we do know that it has been a decided success in one line of business—a success for the warehouse just as much as for the manufacturer.

The Old System

THE story starts with our company, the manufacturer, doing business with warehouses in just about the usual way. We mailed orders from the home office to the warehouses, or perhaps a salesman telephoned the order; followed by confirmation from the home office; and the warehouse returned one copy of the order with bill of lading. The warehouses sent us bills whenever they felt like it: some monthly, some daily (an awful nuisance—those daily invoices). From the warehouses where a good many 'phone orders were handled we required a daily list of shipments. This daily report was simple, but its great defect was that it didn't carry a record of the stock on hand before or after shipment.

At the end of each month we required an inventory, on our blanks, which did not have to be a physical count excepting once in six months. Inventories were taken without any assistance from the representatives of this company.

In our home office we carried a daily balance of every kind of stock in every warehouse, which we checked monthly against the inventory reports.

Defects of Former Method

CORRESPONDENCE AND DELAY.—If a warehouse inventory did not agree with our office record it was quite impossible for us to learn the cause until we had corresponded with the warehouse. It was the middle of the following month before we could begin to get disagreements explained, and with those warehouses which were slow in answering correspondence we could not come to a settlement for two or three months, or even longer.

ADJUSTMENT NOT REACHED.—A large proportion of the warehouses look on correspondence as a nuisance, and we were at our wits' end to get some of the disagreements explained. One warehouse had accumulated in six months a shortage equal in value to its entire

charges for storage and trucking during that period, and after waiting six weeks we charged them with the value of this stock. (Afterward we learned that the manager of this warehouse had been allowing a little girl in his office to handle all of our correspondence and it never occurred to this little girl that the foreman had failed to take an accurate count of stock.) We needed a method that would explain disagreements before the inventory was received. As outlined below we had to work out a system which would enable a warehouse to know whether its inventory figures were correct and to furnish us with all possible information when mailing us the inventory.



E. Stanley Grant

Mr. Grant is a member of the advisory committee organized at the Cincinnati convention of the American Warehousemen's Association to form a national association of shippers' representatives who deal with warehouses

TOO LONG GAP BETWEEN INVENTORIES.—A six months' gap between physical inventories is too long. If mistakes are being made in filling orders they will be forgotten in six months, and with a careless foreman a great deal of deterioration may take place unnoticed. On the other hand, a month is rather a short period between inventories unless stock moves quite rapidly, and the expense is hardly justifiable. We compromised on three months, entirely dropping the book inventories in between, but demanding a thorough count every quarter.

GENUINENESS OF INVENTORY.—We had no check on the sincerity of the inventory. For instance, on July 1, 1919, a certain warehouse sent us a supposed report of physical inventory which checked beautifully with our records. Then on August 6 they surprised us with a voluntary inventory which showed many disagreements. The first inventory was from their books, and the second showed the real state of affairs. We now require a representative of this company to be present at every inventory. Our organization being small, this representative is usually a salesman. We have educated these men to realize that it is distinctly to their advantage to know what is going on in the warehouses which supply their particular territories.

WAREHOUSE RECORDS INADEQUATE.—There was no denying the fact that some warehouses had no workable system of keeping records of our receipts, shipments, and balance of stock, and that other warehouses with good enough systems were not using them. One warehouse, operated by a very large and established

company, asked for permission to throw all its old stock into one new lot. We were astonished at the request, because their physical inventory agreed quite well with our figures, but on visiting this warehouse we learned that their books did not agree with their inventory at all; in other words, their difficulty was entirely with their own books. We felt it necessary to require warehouses to keep daily record of stock on hand, not only for accounting purposes, but also in order that if they received 'phone inquiries they could tell immediately whether they had stock of a certain kind on hand.

CONDITION OF STOCK.—We had no check on the warehouse's report of condition of our stock. It is very easy for a foreman to forget to make notations of bad appearance or damage. Representatives of our own company have a strong personal interest in not allowing customers to receive goods in poor condition, and by having these men present at inventories we are much more likely to receive full report of exceptions.

FIGURING CHARGES.—Many warehouses still figure their storage charges by the month from the exact day of receipt of shipment. Their bills, with perhaps twenty-five items, falling due at various days of the month, could not be checked at a reasonable expense. We determined that storage charges must be figured from the first of the month, regardless of when the goods were received and that the warehouses must make these charges agree with their inventory. Only one warehouse has insisted on continuing to figure charges by the month from the actual date of receipt and most of the others seemed glad to get away from the heavy clerical labor of the old method. On shipments received during the month, storage is charged at a fraction of the month's storage up to the first of the following month.

ANTAGONISM.—There was a general feeling of antagonism between warehouses and our home office. Of course with some houses we had always been on the best of terms, but this could not be said of more than one-third of them. Regardless of whose was the fault there was just one way to work up any real co-operation and that was by personal contact.

Every warehouse is now visited by our representatives at least every three months and most of them every few days. Our distribution manager visits each warehouse at least every six months. The improvement in cordiality has been remarkable and there is no question but what our company learns things from the warehouses as well as giving the warehouses a better understanding of what we need.

New Report Form

IN order to remedy the above named defects it was necessary to have a new form of warehouse reports. It was with great reluctance that we reached this conclusion, for we well realized that nobody has any right to ask a warehouse to do

Instructions to Warehouses Regarding NEW MONTHLY REPORTS

Use a separate sheet for each size package in each grade of Oil or Paint.

RECEIPTS

Sipe's Order Number

If the material received is from our factory, take this order number from the blue invoice mailed to you. If the material is returned by a customer, show in this column the customer's name.

Damage Notations

Note must be carried in this column on all packages received or inventoried as not in first class condition. The amount of leakage is best shown by weighing packages.

Warehouse Charges

For convenience these columns are right next to the number of packages received. Show your rate per package at the top of page and show the amount in line with each shipment received. If you charge separately for labor, use other column for this.

Warehouse Receipt Number

If you prefer, show your lot number here.

DELIVERIES

Sipe's Order Number

Show this number whether our yellow order is received before or after shipment has been made.

Bill of Lading Number

If delivered locally, show your delivery slip number. We would like to have a separate number of some sort for each delivery in order to avoid confusion on customers to whom you make a good many deliveries.

Delivery Charges

Show in this column your charges for weighing, marking packages, making bills of lading, etc., if assessed on a flat package basis. This column cannot be used if you charge a minimum per shipment. Do not show trucking charges. Render a separate bill for trucking charges.

DAILY BALANCE

This column is placed for convenience right between the number of packages received and the number of packages delivered. Subtract the number delivered from the number received and show balance on same line in this daily balance column.

Enclosed is sample sheet with all sorts of entries shown for your guidance. At the end of the month send us the original and keep the duplicate sheets.

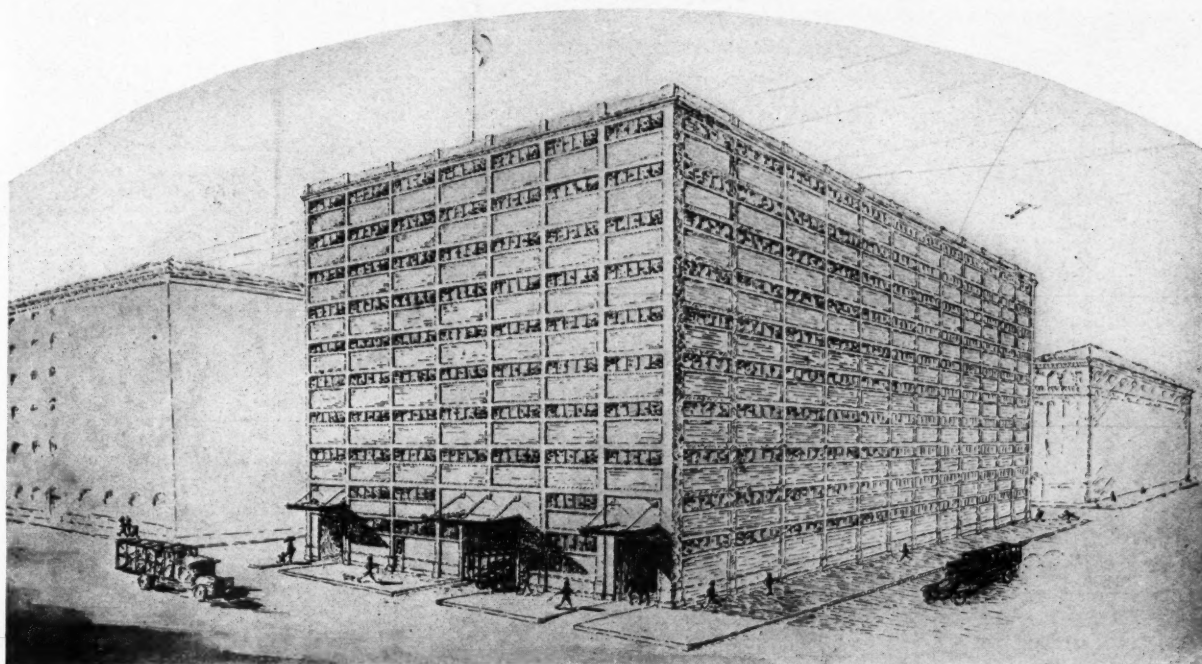
JAMES B. SIPE & COMPANY

The Sipe system of instructing warehousemen who handle the company's drying oils and paint specialties

any unnecessary clerical work; but we know as a result of actual experience that we need every bit of the information called for on the monthly report, of which a sample is shown on page 12.

HOW MANY SHEETS?—It is impractical to carry a record of all our stock on one sheet. A complete record might be on two sheets, one for shipments and another for receipts, but such sheets would have so many columns and spaces on them that it would require a very accurate clerk to get every figure in the right place, and in fact such a system, though apparently simple, is really very complex. We therefore provide a separate sheet in duplicate for each size package of each grade of stock, and we furnish each warehouse with a substantial binder to hold the sheets for the current month.

WHAT LENGTH OF TIME?—A daily report has the great advantage of prompt information for the home office, but if this report carries a record of balances of stock, these



Linking Warehouse and Railroad by MOTORIZATION

RAILROADS entering Cincinnati have done something amazing which is unprecedented in transportation history.

They have linked up their terminals through a co-operative system of employing a special make of motor truck with a demountable body manufactured exclusively for this service.

The wasteful method of shunting freight cars of interline shipments from station to station has been abolished. This has conserved time. It has effected economy. It has reduced handling costs.

This co-operative system, known as motorization, is adaptable to commercial warehousing. It will be adopted by commercial warehouses, in the opinion of engineering authorities who have studied the Cincinnati system, when storage executives of vision and energy arrive at that stage, in the logical growth of their industry, where united action will:

1. Form warehouse organizations in the big

cities—not merely associations of a civic character as exist to-day, but business units for commercial purposes.

2. Establish co-operative relationship among these organizations, so that through co-ordination the cost of merchandising commodities from one section of the country to another may be decreased.

Two years ago in Cincinnati it cost the railroads between \$1.12 and \$1.13 a ton to move merchandise

by switching trap cars on the rails connecting the terminal stations. With increasing labor and other charges, this tariff mounted gradually to between \$1.71 and \$1.72 a ton.

Through motorization—the transferral of goods on motor trucks instead of in freight cars—the cost is between \$1.36 and \$1.37 a ton.

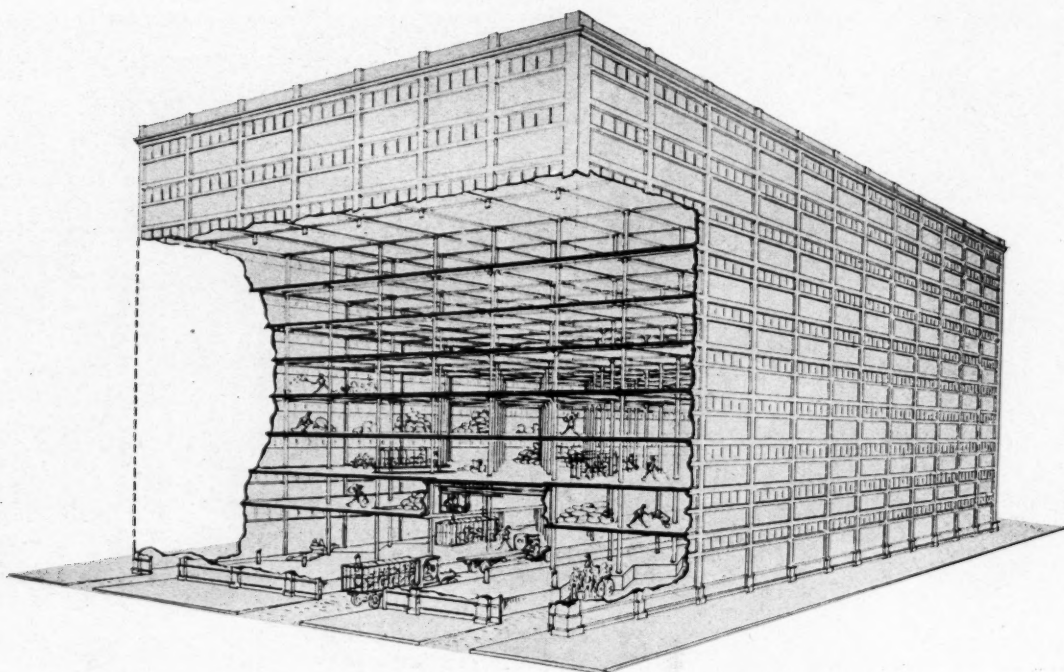
In a year's time these roads so handled at Cincinnati about 350,000 tons of freight. The saving effected through motorization is 35 cents a ton—or \$122,500 annually.

A story like this one may some day—will it be 1925, or 1930?—be written in the past tense, as the narration of an accomplishment that has been achieved. To-day it is a story which some will say is visionary but which well-informed railroad officials will testify is not visionary at all but is rather a forecast of something to be—a look into the practical future when railroad executives, motor truck owners and warehousemen will pool resources and co-ordinate available facilities through the system of motorization which already has had its inception at Cincinnati.

MOTORIZATION

will mean decreased distribution costs for the manufacturer, because:

1. Switching or trap car service in congested centers will be eliminated.
2. Rehandling of commodities will be reduced to a minimum.
3. Warehouses utilizing motorization will be able to operate profitably while charging lower handling tariffs than to-day.



Is this to be the warehouse of the future?—Street level for traffic ways and freight platforms—succeeding stories for storage of products which have been moved by elevators and traveling cranes—possibly the upper floors rented to business firms as office space—This is the visualization of an off-track or inland transfer station and warehouse as designed by the Motor Terminals Company

Before discussing the warehouse phase of the motorization system, a knowledge of the truck situation is essential. At Cincinnati, fifteen White trucks, with others in reserve, are in daily use. These are 5-ton vehicles, each with special wheelbase of 205 inches. An average load of four and thirty-seven hundredths tons is transported. The specially-manufactured body is one-half the size of the average freight car. Two of these bodies may be placed on a railroad flat car.

The Years Ahead

The system of operating these trucks and bodies may be visualized by studying the accompanying photographs and drawings.

The drawings show what the Motor Terminals Company, which has motorized Cincinnati's railroad terminals, considers a model warehouse.

Look into the future. Suppose ten of the big merchandise, cold storage and household goods warehouses in a given city pooled capital sufficient to finance the construction of a building of this type. The cost would not be greater than it is to-day to put up a modern warehouse equipped with material handling machinery. The advantage of the motorization system is that such a storage plant does not have to be located on a railroad. It does not have to have spur track connections. The saving effected through cartage by motor truck, together with the economic elimination of constant rehandlings because of the demountable body feature of the truck, make it wholly unnecessary for such a warehouse to be situated at rail siding.

To-day the ten warehouses in a given city each

may be located on a spur track. Each is paying high costs for switching cars to its plant, or demurrage charges may be piling up while the cars containing freight consigned to it are waiting at a terminal to be unloaded.

Through the joint warehouse motorization system freight could be removed from cars upon their arrival and placed in temporary storage in the warehouse; and, at the option of the consignee, would then be transported—still through the process of motorization—to his own storage plant or to the point of destination.

Where Land Values Are Low

By constructing the joint warehouse, not adjacent to railroad but at some interior point, the benefit of cheap realty price is obtained. Moreover, the entire building does not have to be given over to motor traffic space and storage space; the structure can be so high that the upper stories can be rented to private business interests, and this income would further reduce costs.

The logical development of the system would be that the warehouseman, having been made the beneficiary of reduced costs, would find himself in a position to quote lower handling and storage tariffs to the manufacturer or to the owner of household goods.

The effect would be decreased distribution costs for the manufacturer. Decreased costs of distribution for the manufacturer would have natural effect toward lowering prices to the consumers.

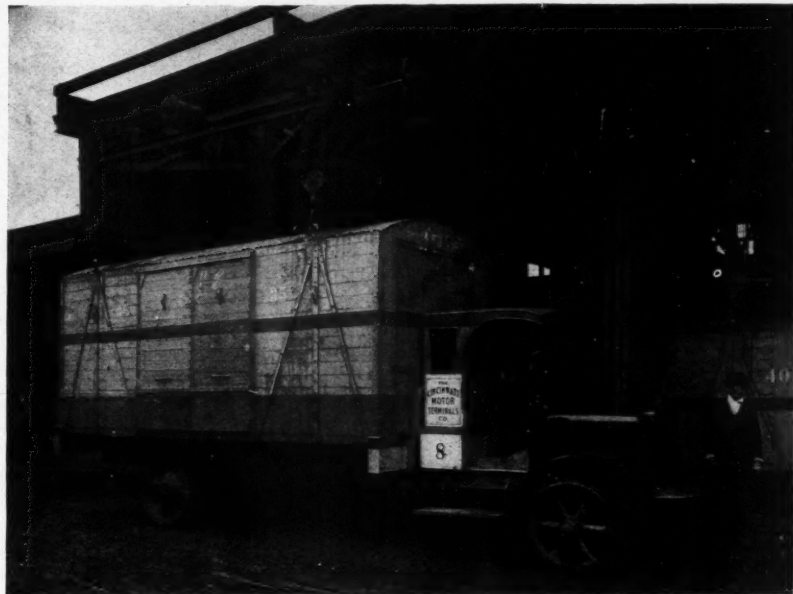
The fact, already set forth, that two of the demountable bodies fit snugly on a railroad flat car, is an economic feature not to be overlooked in the distribu-

tion of merchandise or household goods by rail from city to city. At a warehouse in Boston, as an illustration, two of these bodies may be loaded with commodities; the bodies placed on a motor truck, taken to a rail terminal and placed on a flat car; that flat car sent to San Francisco; and the bodies there removed by truck from terminal to warehouse, or direct from terminal to destination. Similarly, the movement of household goods between cities is expedited, with the number of rehandlings reduced.

The motorization system created at Cincinnati, and which is being studied by railroad officials in all parts of the country, was described at length by B. F. Fitch, president of the Motor Terminals Company, at the recent convention of the Material Handling Machinery Manufacturers' Association, in New York. In conjunction with officials of railroads entering Cincinnati, Mr. Fitch has for several years been investigating rail terminal costs. In his address at the New York meeting he discussed statistics which must be of interest to all traffic managers and warehousemen. After pointing out that the scientific operation of motor trucks has been ignored by the railroads, he said:

"The ingredients to be considered in transportation cost estimates are tons, miles and minutes, and generally speaking, the greater number of tons and miles, crowded into the smallest number of minutes, the lower the transportation cost.

"Every unit of transportation from wheel-barrows to



This body, with half the capacity load of the standard freight car, is lifted from the motor truck by overhead machinery—Two of these bodies fit on a railroad flat car

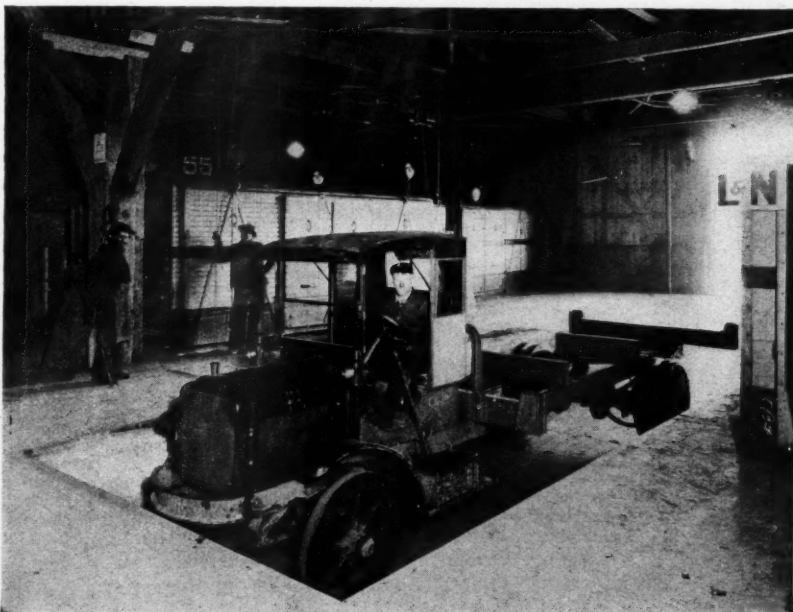
gondolas is valuable when allotted exclusively to the service it is best fitted to discharge. A team can successfully haul 75 ton miles and a motor truck 500 ton miles in a ten-hour working day. Compare this with railroad performance in which the average box car movement is but 25 miles per day. If loaded with merchandise to but a ten-ton average, it discharges but 225 ton miles in a 24-hour day. It is, therefore, obvious that box cars suffer a handicap.

"Freight house operating practice demands that box cars lie idle ten hours a day. If utilized exclusively for transportation and kept continuously moving the remaining fourteen hours, even at an average speed of but twenty miles per hour with ten-ton loads, the potential possibility of each freight car is 2800 ton miles daily.

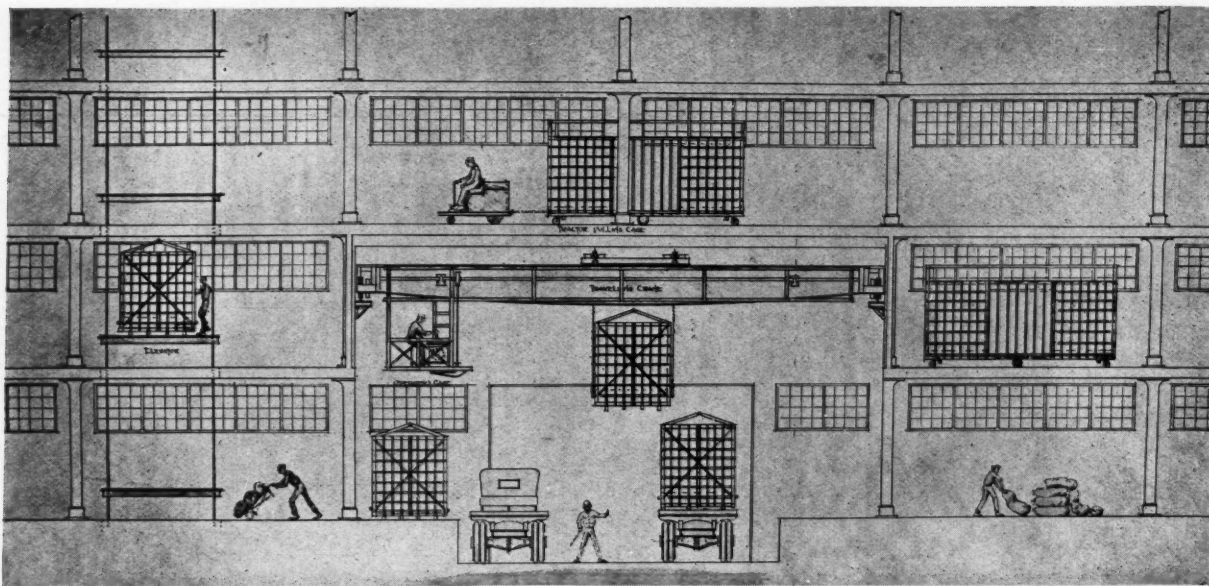
"There is practically no limit to what the rails will carry, if cars, when consolidated in trains, are at once started and kept continuously moving; therefore, it is logical to charge inadequate terminal facilities with the major portion of the box car's tonnage deficiencies. Inadequate terminals alone are not responsible for this nor can either the railroads or the public be censured for illegitimately using box cars in lieu of other facilities for short term storage. These are influences detrimental to box car efficiency, but, without terminals, necessary evils.

"The prime trouble is that, as an operating necessity, in absence of other facilities, box cars have been assigned to a service for which they were never originally intended.

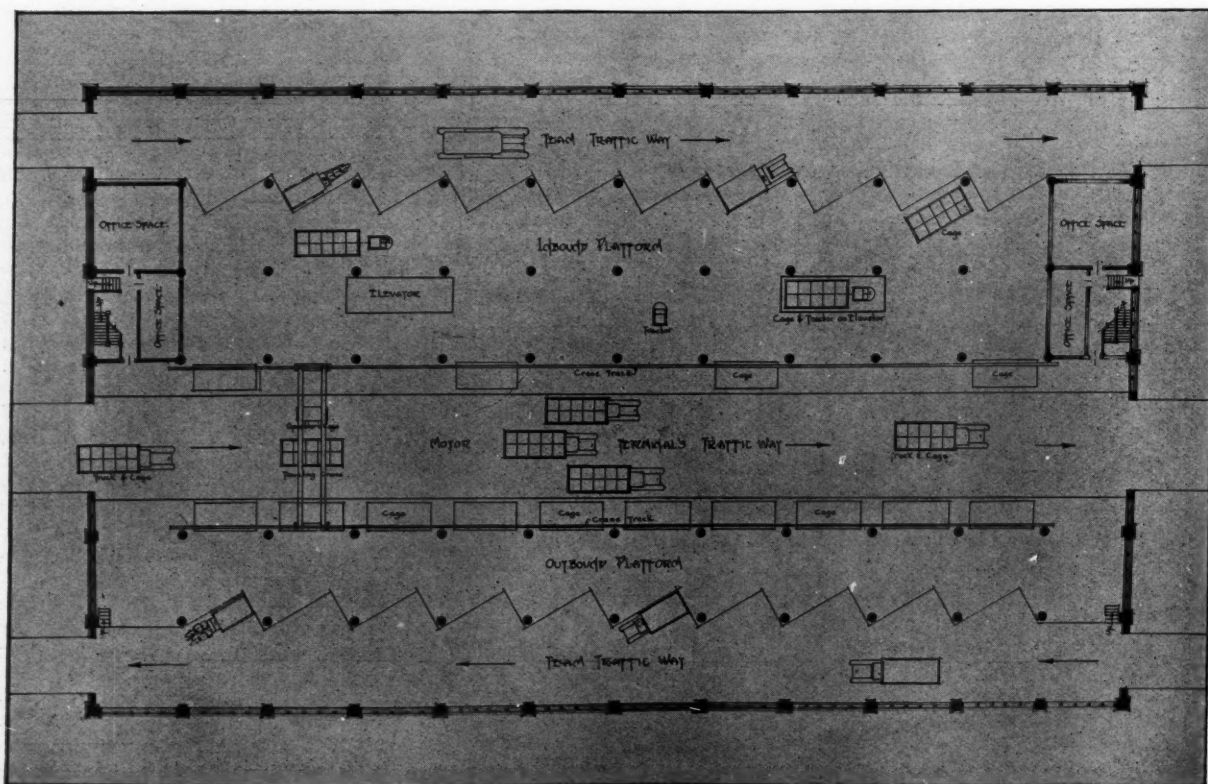
"Our national transportation practice and trade influences of the traffic do not permit of any radical terminal changes. Any revolutionary attempts along this line might embarrass our



Specially-built White chassis with 205-inch wheel-base—in background may be seen one of the freight-carrying bodies



Here are shown (at top) how the demountable bodies are transported with cranes and elevators through the proposed inland warehouse, and (below) the street-level plan with traffic ways adjoining crane-tracks for the specially-made motor trucks and other thoroughfares for teams, with space-saving methods of using the inbound and outbound platforms



production resources as greatly as a change in the monetary basis. Therefore, evolutionary improvements only can be considered.

"Refinements of present rail practice and additional facilities will occur, but rail transportation cannot be greatly improved because locomotives are now practically up to the safety limits of rails and bridges and

without increasing weight of locomotives, draw bar efficiency cannot be increased, and without an increase in draw bar efficiency transportation costs cannot be lowered. Thus, obviously the field for improvement is terminals.

"To demonstrate the fact that railroad transportation has outgrown railroad terminals, it is interesting to note

that from outer classification yards to pier station delivery at New York the cost to carrier is not less than \$3.50 per ton and similarly, at Philadelphia not less than \$2.50 per ton, or a joint terminal cost of \$6 per ton. Whereas, the main line haul between these two terminals, if estimated at a maximum cost of 6 mills per ton mile, suggests a transportation cost of 60 cents versus terminal costs of \$6. Chicago is no better off than Philadelphia and the haul is about ten times as long; hence, joint terminal cost is as great as the transportation or rail haul cost from Chicago to New York.

Many Solutions Suggested

"After five years of terminal studies, inspecting innumerable stations built over fifty years ago, which are still the intakes and outlets of our great transportation systems, using the recognized best equipment in the world, no wonder the subject of terminals is a topic of nation-wide discussion and, naturally, all with creative brains are offering solutions.

"With unlimited financial resources the engineering talent of this country can quickly solve the problem. Ideal joint terminals at a cost of \$50,000,000 to \$500,000,000 are possible in all our principal centers; but, present chaotic conditions considered, who will assume the responsibility of such abnormal financing? Even if offered opportunity to avail themselves of such the railroads would have to scrape present huge investments and the scrapping of these investments at any industrial center will disrupt really values to possibly financial ruin of innumerable manufacturing plants built in suburban localities on the theory that the inducement which warranted the building would afford perpetual service.

"For this reason each present terminal layout must be continued substantially as at present. Conservatism recommends no radical changes, but demands evolutionary changes to better conditions for both carriers and shippers.

"Every city in the country has its labyrinth of rails, team tracks, private sidings, obsolete main freight stations and sub-stations, between all of which box cars are shuffled or switched around, like cards in a solitaire deck, in the performance of a duty for which the cars were never designed.

Switching Adds to Costs

"The innumerable switch cut movements of such cars confiscate capacity of the rails and the cost of handling these cars over rails, to detriment of through traffic, is primarily responsible for excessive terminal expense.

"If all the large cities in the country could be idealistically furnished, scientifically designed and mechanically operated freight houses, there is no question of accruing economies both in terminal practice and transportation costs, because the railroads then would enjoy a one point make-up and a one point break of all freight cars. The result would be loading of cars to weight or displacement capacity for uninterrupted direct movement to other terminals. This consolidated loading would naturally decrease the number of cars now dispatched from a plurality of stations within any one city to the existing plurality of stations in all other cities.

"Despite this opportunity, even if attainable, the industrial trap car and the intro-terminal trap car will apparently always complicate terminal interchanges to detriment of switching refinements. Terminal operating economies will be in direct ratio with the decrease in the number of interchange switching combinations. So apparently new freight stations at huge investment are no guarantee of great reductions in terminal expense, be-

cause freight station labor cost is but a small item as compared with total terminal expense.

"Third Day Arrivals"

"Between all the widely distributed freight houses of the various railroads in each and every terminal box cars are used in transfer or connecting line service. When so used, they are in various sections termed 'traps,' 'transfer' or 'ferry' cars. For instance, in any city with seven non-competing railroads radiating to different sections, each line receives daily in its city cars some freight for each of the six connections. Numerically this means 42 cars in transit to and 42 cars in transit from, a total of 84 cars. But due to yard interchange delays these cars average a third day arrival instead of a second day arrival; hence, 252 cars are assigned daily to such service. Thus 75,600 car days are required annually.

"Industrial expansion at any city with seven initial lines, has, as a rule, outgrown station facilities, and railroads for economy's sake have strategically established sub-stations along their right-of-way as traffic influences for shipments from outlying districts. Since all the freight from these outlying districts has to be brought to main stations to be consolidated in cars for dispatch from such main stations to destination points, and since all of the freight for these sub-stations comes out of main station cars on arrival, trap cars are necessary in this main sub-station service of each line. The number of cars so used is a multiple of stations. If, as above stated, each of the seven lines has three stations, 42 cars are required, movement delays to which are as great as connecting line cars; therefore, the wasting of an additional 37,800 car days. This explains one of the reasons for car shortage and an operating abuse which has been obsoleted by the success of a motor terminals installation at Cincinnati.

Moving the Bodies

"Briefly, this installation consists of overhead rails, electric cranes, electric hoists, motor trucks and a plurality of interchangeable motor truck bodies. The system of operation requires an empty body for each station movement demand of railroad on its inbound main station platform. At the larger stations there are several locations for such body settings, thereby decreasing the trucking distance for freight. As the freight comes from the cars, it is trucked to the nearest location containing a body carded for any connection or any sub-station.

"When loaded, these bodies are sealed and under telephone order of a joint dispatcher, employed by the railroads, mechanically loaded onto trucks and thus routed over city's streets to connection.

"On arrival at outbound platform of the connecting line, the body is mechanically removed and an empty body, previously unloaded, is similarly put onto motor truck chassis for delivery to inbound platform of that house, where the operation is repeated and another loaded body forwarded in the same manner to some other freight house.

"If the load happens to be to a sub-station, it remains on platform until dispatcher is advised by agent at sub-station that return load is available. Then the loaded body of inbound freight to that sub-station is forwarded and the motor truck exchanges same for the previously reported load of outbound freight to be delivered at main station, where it is consolidated with other city freight in line cars made up daily to innumerable other destination points.

"From the above it is evident that all freight, except possibly the portion arriving during the last hour of station operating day, whether between main and sub-stations or between main stations of the various railroads, is currently loaded and out of the terminal. Previously this freight by trap cars suffered an average three days' delay and the shuttle movement of these individual cars over terminal rails interfered with the group movement of complete cuts of station cars. Hence, the congestion which previously made Cincinnati notorious as a check-valve in rail routings.

The Search for Proof

"In May, 1917, the Big Four Railroad permitted a test installation between its five main and substations. The innovation was an early success, but the other roads were skeptical of its enduring efficiency. In the early months of 1918 a special committee was appointed to analyze the entire terminal and, based upon Big Four accomplishments, recommend what economies and benefits could be anticipated from completely motorizing Cincinnati's terminal.

"The summary of this comparative report prophesied the following, and as a result contracts were negotiated:

"Annual economy—\$61,652.96.

"Advance movement of freight, 52.4 hours.

"Increase inbound platform floor area 14.8 per cent.

"Increase outbound platform floor area in ratio with station operation.

"Increase main station trackage 21.4 per cent.

"Increase in main station realty 122,660 sq. ft.

"Release 66,862.5 cars for line service, per annum.

"Extension of present labor, 30.4 per cent.

"Eliminating the rehandling of 86,976 tons of freight, lessens railroads' liability of loss and damage.

"In 1919 equipment orders were entered and railroads commenced station changes and superstructure construction. The terminal is not fully equipped, for both the railroads and the Cincinnati Motor Terminals Company which is operating this equipment on contract basis for the railroads, have suffered exasperating delays. However, in recent analysis of accomplishments it is proven that, due to increased operating costs of railroads the prophesied 17.1 cents per ton economy is in practice actually a saving of 35.2 cents per ton and, therefore, the annual economies will be \$126,507.75 instead of \$61,652.46.

Better Service—Lower Rates

"This service has proven that all widely distributed station facilities can be laced up as a unit without investment cost to the railroads, thereby giving to each and every terminal the benefits of a union freight station. The rates paid for the service are less than what interest charges alone would be on the cost of constructing a consolidated terminal. The operating program of railroads and the established perquisites of shippers are in no-wise disturbed, but the railroads at large through the influence of this current versus their past interrupted movements enjoy an increase of terminal rail, station rail, and station platform facilities. This increase can be perpetually extended at minimum investment, in ratio with increasing tonnage demands, which naturally will accrue at any industrial city enjoying better shipping facilities.

"Extensions are now possible in the form of rail sub-stations or off-track warehouse sub-stations by this system, and can be gradually provided when tonnage demands warrant. There is no necessity to finance elaborate facilities to take care of accruing demands which may not develop for fifty years.

"What has been done at Cincinnati can be adapted to the varying demands of all principal terminal cities. In some the connecting line trap car predominates as the greatest detriment to successful terminal operation. In others the sub-station trap car.

New York's Conservatism

"The flexible possibilities of trucks are now clearly defined for industries whose transportation facilities are dependent upon rail extensions. Opportunities at each point are limited only to intelligent installations following detail analysis to establish the greatest terminal deficiencies of carrier to meet shipping demands of the public.

"Accomplishments at Cincinnati warrant idealistic theories of the system as applied the greatest terminal problem in the world. New York is that problem, for as the established principal port of this country, our industrial expansion is restricted by New York's lack of port facilities, unless, as will ultimately happen, the nation at large refuses to longer suffer by reason of New York's conservatism and creates other trans-shipment ports.

"At present the railroads monopolize approximately 30 per cent of Manhattan's piers for freight stations. To expand the port these piers are indispensable for coast-wise and overseas steamers. Where not individually owned, the rental value of piers is out of all proportion with freight tariff returns.

Could Release Pier Space

"A few blocks inland, realty enjoys but a fraction of bulkhead rental values. If inland joint stations in say 12 zones were constructed on this otherwise comparatively non-productive realty, the railroad piers could be released for shipping and station facilities be attained by the railroads at practically no cost, because of increased rentals possible from warehouses and industrial floors above joint freight terminals.

"If all roads contributing this terminal had transfer stations at their rail bulkheads or a few blocks back from the Jersey, Staten Island and Bronx valuable waterfront, carload and less carload package freight could be immediately transferred from cars to motor truck bodies, which would be designated for each of these inland stations, and the freight cars thereby released for immediate reloading of outbound freight. The number of bodies assigned each zone station would be sufficient to meet the tonnage demands.

"These bodies when loaded on trucks, would be routed over streets to nearest available Staten Island or Jersey slip for ferrying to Manhattan slip nearest inland station destination and vice versa on return movements. Until they were proven inadequate, public ferries could be used. Later, if necessary, possibly special ferried and special slips at a few of the innumerable pier points now occupied by railroads could be provided.

"If we add to the generally admitted \$3.50 terminal cost to carriers the established minimum cartage cost of \$2.50 per ton to shippers, the joint terminal cost at New York is \$6. Under normal conditions approximately 30,000 tons daily moves from Staten Island and Jersey to Manhattan and 20,000 tons daily from Manhattan to Staten Island and Jersey on outbound movement, a total of 50,000 tons daily, which at the above cited \$6 joint cost is an item of \$300,000 per day.

"For the railroads alone at Cincinnati the interchange is furnished by the Cincinnati Motor Terminals Company between stations within a ten-mile zone at rates averaging less than \$1 per ton. The minimum is 80 cents and the maximum \$1.25. If trucks moved by short ferry

(Concluded on page 35)

Eliminating

WAREHOUSE FIRE HAZARDS

Storage Losses Are Increasing

Read About Our Fire Service Department on Page 32

(Editorial Note.—This is the third of a series of articles relating to the efforts by the National Board of Fire Underwriters to remove all warehouses from the class of hazardous risks. The fourth will appear in the May issue.)

THE importance of the campaign begun by the National Board of Fire Underwriters to have fire hazards removed from all types of warehouses is emphasized by the figures of recent years in relation to losses from fire in storage plants.

These statistics tell a story that will surprise the industry. The story is that fire losses in warehouses are increasing.

The figures for 1919 have not yet been compiled, but there is no reason to believe that they will show a situation less startling than the statistics for 1918 disclose — and that is that the insurance companies in the United States in that year paid warehouse fire loss claims to the number of 3000, as compared with 2760 in 1917 and 2694 in 1916.

In amounts paid on these claims, the total in 1918 was \$11,495,308, as against \$9,033,171 in 1917 and \$6,596,652 in 1916.

The jump in the amount paid in 1918 was \$2,462,137 over 1917. The relative increase in 1917 as compared with 1916 was \$2,436,519.

In considering fire losses, it should be kept in mind that the \$11,495,308 represents alone the amount paid on claims. This total is estimated to be only from 50 to 80 per cent of the total 1918 fire losses suffered by the industry.

The situation is, then, that in 1918 American warehousing lost from \$17,000,000 to \$21,000,000 worth

of property through fire. In 1918, 1917 and 1916 the total losses estimated were approximately between \$40,000,000 and \$50,000,000.

This explains why insurance companies are quoting the rates they are to-day—rates against which the industry protests.

Protests will be futile unless the industry works in conjunction with the National Board of Fire Underwriters and its Conservation and Fire Prevention

Associations being organized in the forty-eight States in the national movement to check the growth of fire losses by bringing the hazards down to the lowest possible minimum.

Reproduced on page 32 is a letter from T. Alfred Fleming, Supervisor of the Conservation Department of the National Board of Fire Underwriters, suggesting that *Distribution & Warehousing* call to the attention of the industry that the Board is prepared to send speakers to meetings of warehousing organizations so that the subject of eliminating fire hazards "may be properly presented" at those meetings.

During 1921 such meetings are to be

held in Minneapolis, Columbus, Waco, Tex., Chicago, New York, Newark, Philadelphia, Seattle and other cities by various local, State and sections organizations, and the American Warehousemen's Association and the American Chain of Warehouses will meet in December at a city yet to be selected.

Here lies an opportunity for the men identified with these bodies to do something constructive for the industry. Co-operation—and action—will mean lower insurance rates on warehouses.

WHY YOU SHOULD READ THESE ARTICLES

They will tell you what you want to know—and what you ought to know—about your warehouse in relation to fire menace.

They will discuss:

- Reduction of insurance rates—
- Sprinkler systems—
- Fire doors—
- Types of warehouse construction—
- Liability for losses—
- Self-inspection of warehouses—
- Patent appliances of all types—
- Army methods of protecting storage plants—

They will keep you in contact with the construction developments in a national campaign designed to minimize fire risks in buildings where so much of the people's foodstuffs and other necessities of life are stored—warehouses.

AND FINALLY

They will point the way out of the Jungle of Excessive Insurance in which most of the warehousing industry has been wandering confusedly for many years. To this end

THE NATIONAL BOARD OF FIRE UNDERWRITERS HAS PLEDGED ITS SUPPORT THROUGH

Distribution & Warehousing.

Official Statistics on Warehouse Fire Losses During Three Years

YEAR	Class 254 COLD STORAGE WAREHOUSES		Class 256 COTTON WAREHOUSES		Class 260 GENERAL STORAGE NOT SPECIFICALLY CLASSED		Class 266 FIBRES (OTHER THAN COTTON, WOOL AND TOBACCO)		Class 268 HOUSEHOLD FURNITURE WAREHOUSES		Class 276 TOBACCO WAREHOUSES		Class 278 WHISKEY WAREHOUSES		Class 280 WOOL WAREHOUSES	
	Claims	Whole Loss	Claims	Whole Loss	Claims	Whole Loss	Claims	Whole Loss	Claims	Whole Loss	Claims	Whole Loss	Claims	Whole Loss	Claims	Whole Loss
1918	94	\$157,153	246	\$1,281,712	2141	\$9,015,470	145	\$413,371	287	\$274,056	60	\$277,575	17	\$36,006	10	\$39,965
1917	89	105,165	197	760,816	1813	6,232,325	131	257,699	339	329,752	63	470,359	4	22,198	124	854,856
1916	96	171,208	426	1,672,186	1621	3,582,474	240	371,734	205	340,668	77	267,090	16	80,817	13	110,475

Class 260 includes merchandise warehouses through which manufacturers' products are distributed. In 1918 the losses almost trebled as compared with 1916. The jump in Class 278 (whisky warehouses) in 1918 over 1917 is attributed to increased valuation of liquors due to the approach of national prohibition. The 1917 increase in losses on tobacco stored (Class 276) is thought to have been due to the fact that larger stocks were maintained by the Government for Army purposes during the war, these stocks being depleted in 1918 as the tobacco was shipped overseas. The high 1917 figure in Class 280 (wool warehouses) is attributed to the many alien plots to destroy these buildings. The 1918 figure in Class 266 is presumably because of the increased valuation of fibres, and the same may be said of Class 256 (cotton), with the 1917 decrease from the 1916 figure attributed to the lowering of stocks in warehouses because of Army demands. Cold storage warehouse losses have remained about steady. Losses on household goods warehouses have steadily diminished.

The National Board of Fire Underwriters has pledged its services to disseminate information, through *Distribution & Warehousing*, to the industry on any problem whatsoever relating to the elimination of fire hazards. Questions of every kind—general or specific—which warehousemen may desire to ask *Distribution & Warehousing* on this subject will be answered in detail with the co-operation of the Board. Charles H. Moores, in his article "The Merchandise Warehouse," in this issue, alludes to patent appliances. *Distribution & Warehousing* is prepared to reply to all queries regarding these—to tell which appliances on the market have the approval of the Board after being examined at the Underwriter Laboratories in Chicago, and to give the names and addresses of the manufacturers, and to explain in detail the purposes and uses of the appliances.

THIS WILL CONSTITUTE OUR FIRE SERVICE DEPARTMENT

The department is for your benefit. By taking advantage of it you can reduce the fire menace that hangs over your warehouse.

Minimizing the fire menace will lead to lower insurance rates.


What is your problem?

A story telling how the East Waterway Dock and Warehouse Company of Seattle protects its great plants from the menace of fire will appear in an early issue. C. A. Moran, a fire Marshal, who is a member of the National Fire Protection Association, is the author.

This Letter Is Addressed to US But—It Is Meant for YOU

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CHARLES L. CASE, Vice-President
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**THE NATIONAL BOARD
OF FIRE UNDERWRITERS**

76 WILLIAM STREET
New York

COMMITTEE ON FIRE PREVENTION AND INSURANCE STANDARDS

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T. ALFRED FLEMING
SUPERVISOR
CONSERVATION DEPARTMENT
February 22, 1920.

Mr. Kent R. Stiles, Editor,
"Distribution & Warehousing",
239 West 39th Street,
New York City.

My dear Mr. Stiles:

I have read with a great deal of interest your recent article and splendid editorial in "Distribution & Warehousing", and assure you I am very much delighted to note your splendid cooperation in the Conservation movement. This is a work which should interest all classes of business men throughout the country.

All the civic and manufacturing organizations are giving the conservation and fire prevention movement serious and careful consideration, and many are arranging for the best speakers available on this subject on their convention programs.

May I suggest that this idea be given to the different organizations affiliated, and that the warehouse can do everything that is possible, not only in the proper keeping of their own records, but in arranging so that the subject may be properly presented at their different meetings?

Assuring you of my satisfaction in the action which you are putting forth, I beg to remain

Very truly yours,
T. Alfred Fleming
Supervisor,
Conservation Department.

F. Dec.

Removing fire hazards from your warehouse means a low insurance rate. A low rate will attract increased patronage. Let the men who know tell you about it. A letter to *Distribution & Warehousing* will bring you one of the "best speakers" mentioned by Mr. Fleming.

Seems Foolish to Keep Arguing When With a Little Co-operation They Could Remove the Obstructions



Drawn by Leo Joseph Roche

The "stumbling blocks" herewith pictured by Mr. Roche are discussed in the series of letters begun on Page 34.

Inaction amounts to obstructionism. Don't be an obstructionist. Roll up your sleeves and help remove the blocks. Every industrial traffic manager who handles warehouse accounts can help by joining the proposed national association (see Page 7). And every warehouseman can help by writing letters to the shippers with whom he does business, urging them to become identified with the new organization.

STUMBLING BLOCKS

A Series of Letters

No. 1

(No. 2 will appear in the May issue)

By a Warehouseman

CRITICISM is always welcome.

The demands of the distributor for daily, weekly and monthly reports should be a thing of the past, as certainly the warehouseman has stood his apprenticeship in this way to almost the limit of his endurance.

A simple way our customers, in the main, are doing is to send their orders in duplicate, keeping the triplicate copy in their order book. The duplicate is mailed back to them with the bill of lading. On receipt of same they can check up with the triplicate copy, thus showing that shipment has been delivered. This is for out-of-town shipments.

For shipments for local consumption, where the jobber is to call at the warehouse, the original order is sent to the jobber in the city and the duplicate to the warehouse, so at the end of the month we can immediately advise what orders, if any, have not been delivered. Thus, making the stock balance to the satisfaction of all parties concerned in a very simple manner and without the aid of a daily report made out in long hand on forms furnished by the distributor.

We have convinced our customers, many of whom are national distributors, that this is the best system. Some of the new distributors have expressed their gratitude for assistance in eliminating their mistakes and giving them absolute check on what orders have not been drawn.

The Other Man's Bookkeeping

The warehouseman is long suffering in this respect, in many instances having to do all the bookkeeping for the distributors, which is unfair and unjust. We believe, however, that distributors are very fair in this matter, and they all welcomed the above system and voluntarily suggested that daily and weekly reports be dispensed with and only monthly reports be made out, which should be satisfactory to any warehouseman doing business daily. If these reports are made out they should be charged for, which I don't believe has been done in the past by the warehousemen.

We treat all people equally, realizing that our satisfied customers are our best assets. However, national distributors have put it over on the unsuspecting warehouseman in years past to such an extent that they nearly had the warehouse industry bankrupt. I have seen cars of goods transferred for

(Concluded on page 35)

By a Traffic Manager

Very naturally all of us look at any matters in which we are interested through our own color glasses and we presume practices vary so greatly, both on the part of the warehouses and those who store goods in these warehouses, that perhaps no fair average can be reached. We find certain warehouses which apparently do their very best to co-operate with us, and on the other hand we find some which are most arbitrary and unreasonable. We believe on the whole that the cold storage houses are more technical than the dry storage. We presume this is because of certain differences between the two kinds of storage.

Many shippers are not willing to furnish the warehouse people with forms for their reports; on the other hand, we find many warehouses which are unwilling to use the forms which we furnish.

The item of clerical help and postage is ordinarily not discussed in a transaction of this kind, as it is part of a certain understood overhead expense incident to any business.

The matter of rates to be charged for storage is entirely one of supply and demand and the warehouses will undoubtedly charge all that they think the traffic will bear. The writer is one of the traffic managers who is unwilling to concede that a further advance in storage is

necessary. We believe that we have reached, or passed, the peak of the load in nearly everything entering into general business relationship. Any curtailment of production such as must result and is resulting through the labor unrest throughout the country will instantly be reflected in a smaller volume of goods for which public storage is required.

During the period of the war it was very largely a matter of coaxing some warehousing concern to handle one's goods, rather than any solicitation on their part. We believe that construction costs will be no higher, and very probably will see a considerable decline in the near future. We consider that already storage rates and other service charges have reached a point where it would be much to the advantage of one employing such facilities to any great extent to place these distributing centers on a branch office basis and provide storage by lease or construction rather than attempting to buy it. At the present time we are using storage, both dry storage and cold storage, to a very considerable extent.

We believe that the very weakest item, generally speaking,

(Concluded on page 35)

(EDITORIAL NOTE.—Publication of these letters is given anonymously for reasons which are obvious. The authors wrote candidly with the understanding that they would not be identified. DISTRIBUTION & WAREHOUSING will be glad to receive other communications of the same character. What is YOUR stumbling block?)

Stumbling Blocks

(Concluded from page 34)

By a Warehouseman

as low a price as \$2 for a 20,000 lb. car. Personally, we have transferred cars without profit. Have seen the point where pool cars were handled for \$5 or \$6 and which were to be transferred locally, people calling at the warehouse door for their goods, where car service accrued for \$1 or \$2 on account of some delinquent jobber not calling for his goods promptly. The distributor insisted upon the warehousemen paying for the car service, and many times they would, rather than hurt the feelings of the distributor.

Again, distributors have sent brilliant traffic representatives to visit the various warehouses with a suggestion something like this: "We pay so much to distribute our goods; take it or leave it. We want uniform rates in all the cities." Most usually the uniform rate would be the lowest rate they could obtain from some one point. They forget that the laborer is worthy of his hire. Many times these representatives, while educated from their standard, have never done the actual work of unloading a car, and the warehouseman is so busy in his little corner that he does not have time to see the world at large. The first thing he knows he is hitched up with a very unprofitable and unsatisfactory contract and in such a manner that he cannot withdraw from same. If he suggests an increase, the distributor would say in no uncertain terms just what he expected and demanded. At the end of the year the result would be that the warehouseman would consider himself lucky if he had enough to pay his legitimate expenses.

Unprofitable Storing

Only eighteen months ago, in the midst of the war, a representative called at our warehouse and tried to convince the writer that he was offering him a very profitable contract. He wished to contract to unload auto trucks at \$3 each, no labor charge and the privilege of a month's storage. He admitted that they would not want the truck nearest the door but would have to have certain trucks taken out. The trucks would come three in a car, one going over the other, and they would be of the 2 to 3-ton variety. My experience is such that I know the cost of unloading one truck would be \$3 alone and that they would take up a great deal of room. Under such a contract we would make no profit at all.

He advised me that he had two parties signed up under contract on the above terms. I found out later that both parties signed up were trying to break the contract as they were losing large sums of money and had lost a large amount under the contract but they were unable to break the contract.

Certainly all warehousemen have had like experience, but I believe that we all see things in a broader way now and that when distributors and traffic men know that the man who works with his hands is now king, things might work out much better.

Co-operation is the spirit of the times, and if distributors and warehousemen would co-operate and allow fairness to rule, everything would work forward to a more prosperous era for all parties concerned.

LINKING THE WAREHOUSE WITH MOTORIZATION

(Concluded from page 30)

routes (at no operating cost in ferry transit other than ferry tariffs) no hauls from rail bulkhead transfer platforms to inland stations could exceed ten miles.

"It is impossible to prophesy what rates for this interchange can be established but they would certainly not be over \$2 per ton. Due to the short haul afforded shippers by these inland stations and the unlimited tail

By a Traffic Manager

of the service performed by these warehouses which we are using is in connection with their clerical service to us. We believe that the explanation of this may be found in a somewhat general feeling on the part of warehouse people that they are being called upon to perform a service that appeals to them to be not within their contract; therefore, they perform a grudging and unwilling service. It is possible that a charge should be made for every little item performed in the office of a warehouse; if so, why should a charge not be made by every other business institution for writing a letter, invoicing goods or any of the details connected with the clerical end of business?

We are reminded by this of the agitation at present on the part of the carriers that charges should be made for all special services performed. The entire freight rate fabric of the United States was predicated on the carrier placing an empty car and receiving a loaded one at one industry and delivering a loaded car at another industry at destination, the commodity rate covering all services performed.

Competition Means Cheerfulness

We believe the same thing was true, in years past, with the charge for storage. Under the old competitive conditions when a light volume of tonnage was moving and warehouses were soliciting our patronage daily those items were handled cheerfully and willingly with no mention of service charges.

Summing this all up, we repeat that we believe, generally speaking, the weakest part of the warehouses' service to us is in connection with the clerical end of their business. They may provide very splendid storage room and take the best of care of our goods and still not be able to give us any accurate report as to the amount of goods which they have on hand.

IF YOU ARE A TRAFFIC MANAGER

WHO HANDLES WAREHOUSE ACCOUNTS,

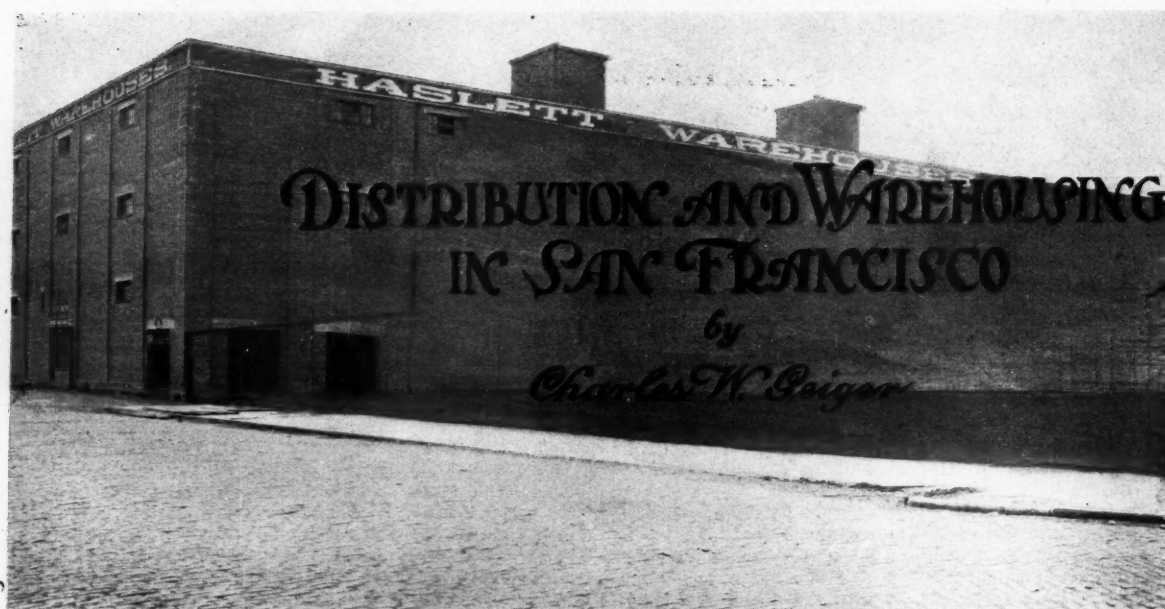
it is up to you to join that new national association.

gate space, which they would enjoy, at such, the cost to shippers could not average over \$1 per ton. Hence, it is logical to infer a joint net saving of \$3 per ton is possible for 50,000 tons daily, an annual item of \$45,000,000. This possible economy now wasted in present practice is reflected in the retail value of every commodity. No wonder the high cost of living on Manhattan! But one year's savings will more than cover the entire necessary outlay if the cost of inland stations is not considered.

"The inland station investment is a realty venture requiring no financing on the part of the railroads, because assured rental returns from upper stories will invite outside capital to furnish the station facilities in ever increasing numbers as fast as the railroads desire to contract for the use of such.

"In short, the motor truck, reinforced by the Motor Terminals Company's system, offers an opportunity to convert present transportation losses into profits for both carriers and shippers, and this opportunity does not suffer the handicap of engineering problems and long construction delays.

"It is an immediately available asset, adoption of which is not entirely dependent on concerted action by the railroads. Our initial installation at Cincinnati has demonstrated the possibility of capitalizing existing economic terminal losses to mutual benefit of all interests."



Looking toward the Haslett company's Humboldt warehouse. Note broad and well-paved street. Traffic congestion is minimized here

THE advantages of San Francisco as a merchandise export point through warehouses are now being realized by many eastern concerns. The writer recently made a very thorough inspection of the leading warehouses in San Francisco, for the definite purpose of ascertaining the advantages offered to eastern concerns, and was amazed at the great stocks carried in the various warehouses, ready to be shipped out on the trans-Pacific steamships at the direction of the owners. Fleets of motor trucks loaded with all kinds of eastern goods can be seen at all times making their way from the warehouses to the various piers, for shipment on the vessels of the Pacific Mail, China Mail, Japanese lines, and other lines operating between San Francisco and all the countries on the Pacific.

The terminal point of four great transcontinental railroad systems (the Southern Pacific, Santa Fe, Western Pacific and North Western Pacific), San Francisco has behind it and directly tributary to it the two immense valleys of the Sacramento and San Joaquin rivers, which drain more than half the productive area of the extensive State of California. Likewise the coast lines north and south of San Francisco are intimately connected with the harbor by important transportation systems steadily ramifying into much new territory.

With a shore line of 300 miles, its capacity for accommodating manufacturing establishments, warehouses and rail-and-water shipping connections are practically without limit. Then there is the very shape of California, which is like an enormous funnel pouring its entire contents down into this bay. Speaking in the world sense, this shape could perhaps be called that of the hour-glass, with all the lands around the Pacific ready to pour their trade into the Golden Gate, and all the riches of California and the States behind her pouring westward through this same Golden Gate.

These views are not the thoughts of one man or a small group. They are the earnest convictions of practically every business man in San Francisco.

From San Francisco to Yokahama direct is approximately 4800 miles sailing nearly due west. From San Francisco to Wellington, N. Z., via Tahiti, is a little over 6000 miles, sailing south and west. Within this segment of the earth's circumference and bordering on the west

shores of the Pacific, is found a large percentage of the world's population. Japan roughly has 6,700,000; China, 400,000,000; Indo-China, 70,000,000; Java, 35,000,000; Philippines, 7,735,000; Australia, 4,264,000, and New Zealand, 1,008,000.

With the exception of Japan and possibly a part of Australia, these countries are mainly producers of raw materials. Their exports of manufactured products amount to very little compared with their production of raw materials. They offer, therefore, the greatest opportunities to manufactur-

ers because each is a potential consumer of vast quantities of finished goods.

A glance at the map of San Francisco will show that the arrangement of the docks, railroads, belt line, freight depots and warehouses is ideal for the efficient, quick and economical handling of shipments of all kinds. The piers extend for several miles along the San Francisco water front, and the Embarcadero, a marginal thoroughfare, 200 feet in width, extends the entire length of the water front, giving motor trucks and horse-drawn vehicles access to all docks.

Most of the warehouses are situated within a block or two of the water front, and practically all streets con-

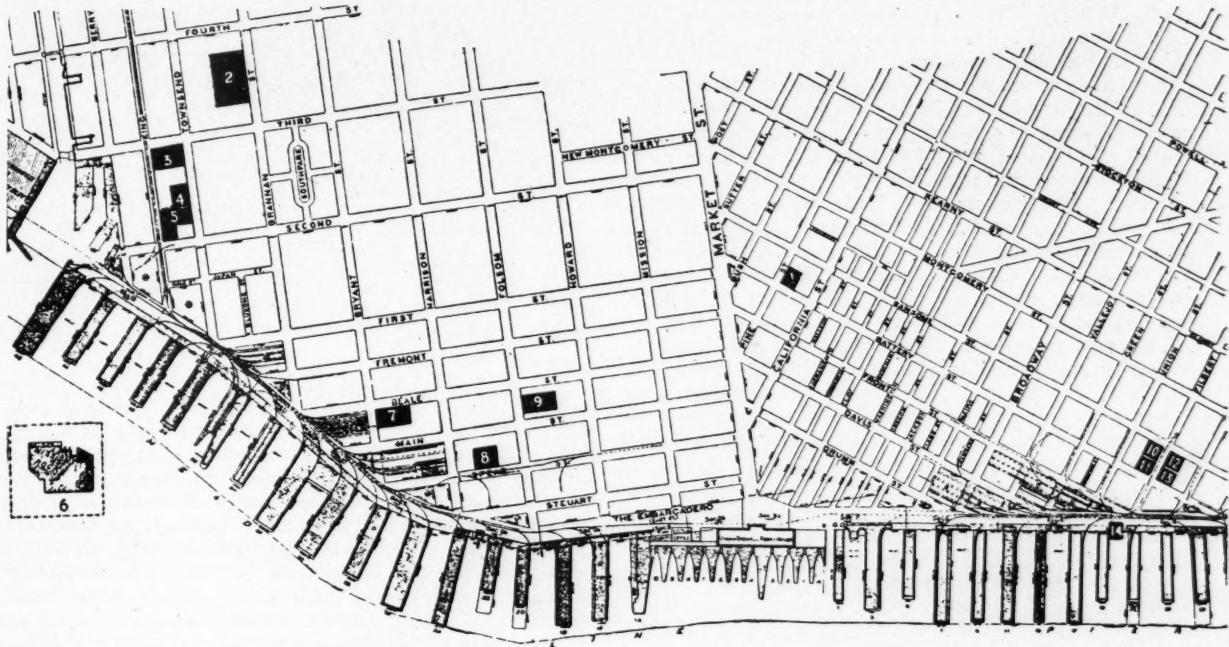
MANUFACTURING DISTRIBUTERS ARE WATCHING SAN FRANCISCO

James Searle, vice-president of the Haslett Warehouse Company, recently spent six months visiting eastern manufacturing plants which distribute through warehouses. Mr. Searle says:

"I talked with the officers of not fewer than one hundred different big concerns, and all wanted to know something about San Francisco. They seemed to be chiefly interested in knowing if we could accommodate them if they suddenly thrust a tremendous business upon us. Most of the Easterners did not seem to realize that we have been preparing for big business for years. I explained how we have been building new piers and creating port facilities, including enough warehouses to handle any amount of business."

WAREHOUSES OPERATED BY THE HASLETT WAREHOUSE COMPANY

- | | | | | |
|--|--|--|--|--|
| 1. Executive Offices
228 Pine Street | 4. Townsend St Bonded
135 Townsend Street | 7. Humboldt
Beale and Bryant
Streets | 10. {Gibraltar
Gibraltar Bean Cleaner
Sansome and Filbert
Streets | 12. Greenwich Bonded
Sansome and Filbert
Streets |
| 2. Overland
423 Brannan Street | 5. Southern Pacific
115 Townsend Street | 8. Santa Fe
340 Spear Street | 11. Pioneer
Battery and Filbert
Streets | 13. Battery Street
Battery and Filbert
Streets |
| 3. General Bonded
Third and Townsend
Streets | 6. Mission Rock
San Francisco Bay Near
Second Street | 9. Folsom
224 Folsom Street | | 14. Filbert Street Scales
Pier 21 |



necting the warehouses with the Embarcadero are broad and well paved, as can be seen in accompanying photographs. Because of the nearness of the warehouses to the piers and the well-paved streets, it is possible for the motor trucks and the horse-drawn vehicles to make frequent trips, carrying large loads. The Embarcadero is owned by the State Board of Harbor Commissioners, which keeps it paved, cleaned and lighted. The Embarcadero is practically level from one end to the other, and the breadth of 200 feet enables motor trucks and teams to travel three and four abreast in both directions.

San Francisco undoubtedly now has the most complete harbor belt line railroad switching system in the entire country. It is located on the Embarcadero, and the system is intended and used to connect up for the switching of freight cars, the various piers, the yards of other railroads, and warehouses and industries generally.

The belt line tracks are connected with the main line of the Southern Pacific at the foot of Townsend street, and the Western Pacific, Santa Fé and Northwestern Pacific

Railroads by ferry slips at the foot of Taylor street.

In order to facilitate handling of increased traffic on the Belt Line, extensive changes are being made in connection with the interchange yard maintained by the Southern Pacific Company at the foot of Townsend street, at the

southern end of the water front; these changes are enabling the Belt Line to handle an increased number of cars more expeditiously and at a reduced cost. There were 164,000 cars handled over the Belt Line tracks during the past fiscal year. Practically every warehouse has spur tracks leading from the Belt Line railroad, with accommodations for spotting from six to fourteen cars at each warehouse, and, if necessary, the engines of the Belt Line railroad will make two or three switches a day. In order to give efficient

switching service, the Harbor Board operates seven switch engines on the Belt railroad, giving twenty-four-hour service.

To render possible the storage of cars during the season of heavy traffic, yards have been built on various seawall lots along the water front; this greatly assists in

NEXT FOREIGN TRADE CONVENTION IN SAN FRANCISCO

Many business men recognize San Francisco as "the western front of American commerce." They look upon the Golden Gate as the central geographically logical distributing point for the western United States for the trade and civilization that are ever moving westward.

The National Foreign Trade Council has selected San Francisco as the strategical place to discuss foreign trade problems and opportunities which relate to the Pacific, the Orient and the west coast of Latin America. This convention will be held from May 12 to 15, inclusive.

doing away with congestion of the main belt line, and in assuring rapid delivery of cars to shippers, and to the different railroad companies entering the city. There is a storage capacity at the present time for 1300 cars. In addition to the storage facilities provided by the Harbor Board, each of the railway companies maintain extensive storage yards and teaming tracks.

The various private railroad companies maintain freight depots in proximity to the warehouse district, thus providing short hauls from the warehouses to the freight depots.

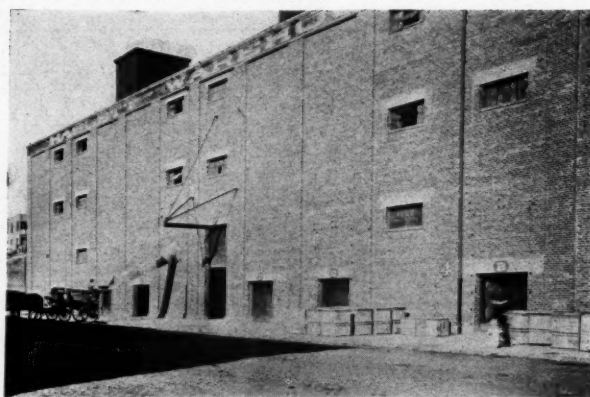
Traffic between the warehouses, freight depots and piers is never held up or slowed down at any time of the year by bad weather conditions. There is no snow or ice, and the streets are never flooded by high water.

Most of the warehouses in San Francisco are of brick, or steel and concrete construction. In the construction of the latest warehouses there has been embodied the most modern equipment, and all the latest time and labor-saving innovations and improvements; elevators, electric trucks, piling and tiering machines, scales and chutes are provided to load and unload directly from cars into drays and trucks or into the building as desired. Many of the warehouses maintain motor trucks for light or heavy hauling, city deliveries and general truck service.

The largest number of warehouses in San Francisco operated by any individual concern is thirteen, owned by the Haslett Warehouse Company. The photographs show the type of warehouses operated by this company, although some of the thirteen storage plants are two and three stories higher than those herewith shown.

The accompanying map shows the ideal location of the various warehouses, most of them being along the water front close to the docks, and in the vicinity of the railroad freight depots. Warehouses Nos. 2, 3, 4 and 5 are within two blocks of the freight depot of the Southern Pacific and Santa Fé, and only about three blocks from the Western Pacific. No. 3 is two blocks from the water front, and Nos. 4, 5, 7, 8, 10, 11, 12 and 13 are about one block from the Embarcadero.

The Gibraltar and Pioneer warehouses are devoted exclusively to beans, coffee, seeds and grain. These warehouses are located on the north side of the water front, about one block from the Embarcadero. Beans, grain, etc., are delivered principally by barges and river boats at the docks usually within a few blocks of the warehouses. Tractors and trailers are employed. Three trailers are usually operated by each tractor; while one is be-



Humboldt warehouses, showing overhead track, and also loading chute, which is connected with interior spiral chute. To the right—one of the fire hydrants which give the warehouse district unusual fire protection

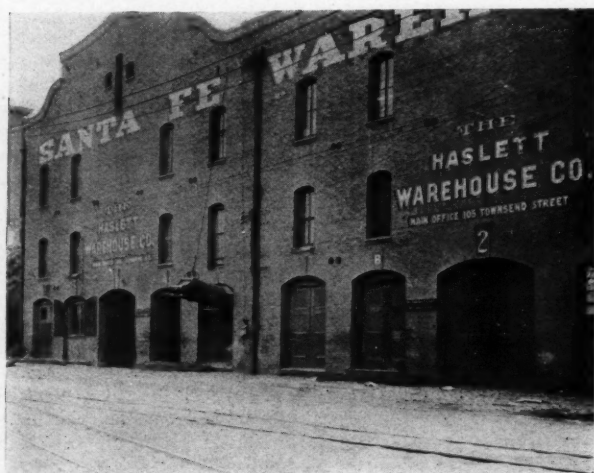
ing unloaded at warehouse, a second is being loaded at dock, and the third is traveling. Each trailer usually carries 85-100 lb. bags of beans, and as many as thirty-one trips are made daily.

The beans are cleaned, and stored, and shipped at the direction of the owners. The large ranch owners often store their entire crop here, in order to take advantage of favorable prices. From 1,000 to 30,000 bags are stored by each ranch owner. At the direction of the owner, the beans are delivered to vessel, railroad or other points. Recently the Haslett Warehouse Company and the Associated Terminal Warehouse Company loaded a steamship with beans for the people of Europe. The shipment, among the largest single ones in the history of the world, consisted of approximately 135,000 bags, or 13,500,000 pounds, of large whites, small whites and pinks. The vessel's cargo consisted entirely of this commodity.

The bean cleaning and handling facilities at the Gibraltar and Pioneer warehouses have a capacity of approximately 200 bags an hour. Much of the equipment is of special design, having been worked out to meet the requirements of the California beans. The machinery is located on the top floors, so that the beans are handled between the various machines by gravity. On the third floor are the special machines for taking out pieces of the adobe soil which is mixed with the beans. These pieces are about the size of the bean, and, prior to the invention of the adobe-removing machine, required a large number of workers, who picked out the adobe as the adobe and beans were carried along on a belt. This machine consists of three sets of rolls, or cylinders, each cylinder being 8 ft. in length and 1½ ft. in diameter. These cylinders are placed one above the other, the top cylinder moving at about 110 r.p.m., the one immediately below this at 80 and the lower one at about 60.

Special machines have been built for polishing beans, and these can be used also for cleaning and polishing unhulled peanuts. Other equipment installed in these two warehouses is utilized to clean, mix and blend coffee.

The Gibraltar and Pioneer warehouses have as part of their labor-saving machinery the Haslett spiral chutes, for delivering sacked products from any floor to car or truck, there being two chutes for delivering to cars, and two for delivering to trucks. A record of loading 990 bags of beans in 48 minutes was made some time ago. The beans were taken from the fourth floor, one man tearing down sacks at the pile, five men trucking and four men in the car. Each chute is equipped with a diverting switch at each floor by which bags or packages can be discharged



Again is shown one of the exterior loading chutes designed to conserve on labor



Type of streets which lead short distances to waterfront, railroad terminals and Embarcadero which parallels San Francisco's waterfront. Motor trucks find easier going here

from the chute at any floor. The chutes are built in such a manner that packages having a tendency to travel fast are carried up the slope of the concave toward the outer rim by centrifugal force. The slope of the outer rim is less steep than that of the inner rim, and, therefore, packages travel slower there than near the inner rim.

Packages with a tendency to travel slowly slide down the concave slope to where the pitch is steeper, as their slow motion does not create sufficient centrifugal force to counteract the concave slope. Thus practically uniform speed is assured in handling a great variety of sizes, weights and characters of packages, and the greatest mixture of merchandise is handled safely in one chute. At the first floor special chutes are arranged for delivering direct to the car, or on a portable platform which extends between the car track and the warehouse. The spur track connected with the Belt Railroad has accommodations for six cars. If the car is not directly in front of the loading chute, the bags can be delivered by hand truck over the portable platform.

The Pioneer warehouse was constructed about one year ago, to take care of the rapidly increasing business of the Gibraltar, and the two buildings are interconnected at all floors. The new building is a class "A" reinforced concrete construction, and six stories high. The steel reinforcing has been arranged so that another addition may be built at the east end, as conditions may warrant.

Bags of beans and coffee are piled twenty-five high at the Pioneer warehouse, this being accomplished by means of the Brown portable piling machines, operated by gasoline engine. Eight men and one weigher weighed and piled 250 bags an hour, twenty-five bags high, some time ago. This is considered a good record.

The Southern Pacific warehouse is used principally as a distributing point. General merchandise is received here in car lots, where it is stored and later forwarded. This warehouse is ideally situated, being within two blocks of the Southern Pacific and Santa Fé freight depots, and within about four blocks of the Western Pacific. It is about two blocks from the Pacific Mail docks. Large quantities of general merchandise are delivered to the

various docks for shipment to the Orient. This warehouse carries large stocks for eastern concerns. These stocks are distributed not only to the Orient, but throughout the Pacific Coast States, and locally in San Francisco. Drugs and groceries are carried in this warehouse in large quantities and are put aboard steamships for the Orient at the direction of the owners. Tea and coffee are also stored here in large quantities.

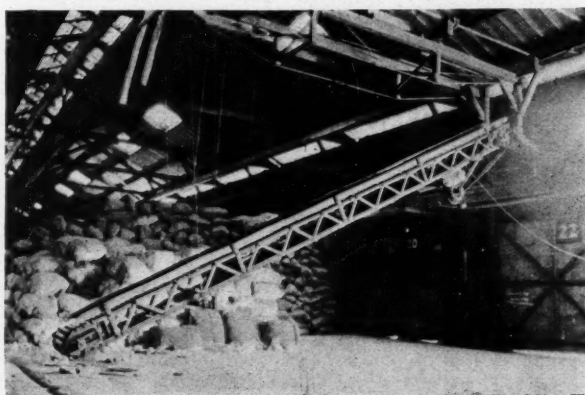
In this building there is equipment for hulling, mixing, and grading coffee, the capacity being sixty tons daily. This warehouse serves also as a storage and distributing point for canned pineapples. The pineapples are received at the docks of the Matson Navigation Company, about six blocks distant. Consignments of as many as 180,000 cases are received on a single vessel. As many as 350,000 cases of pineapples have been in storage at the Southern Pacific warehouse at one time. Pineapples do not remain in storage very long, however, as the demand for them is so great that the entire crop is often sold before they are canned. This warehouse claims a record for shipping pineapples—twelve carloads in one day. At the Southern Pacific warehouse there is a special building for storing acids, chemicals, etc., thus cutting down insurance rates.

At the Southern Pacific warehouse there is a basement and sub-basement where barreled goods are stored, such as paint, lubricating oil, grease, molasses, salmon, etc. One man is engaged at all times in making necessary repairs to barrels. Rubber, vanilla beans, and various products from the Orient are also stored here and distributed on orders from owners.

Pool car distributing and reforwarding also are carried on from this warehouse. Carloads of products are received here, segregated and reshipped at once to various points on the Pacific Coast.

The mechanical equipment and the fire protection system at the Townsend and Southern Pacific warehouses may be of interest. Both buildings are equipped with the automatic sprinkler system. Water is supplied by three pressure tanks on the roof, each tank having a capacity of 7,500 gal. under air pressure of 80 lbs. There is also a 25,000-gal. gravity tank that is interconnected with the pressure tanks in such a manner that when the water in the pressure tanks is exhausted the water in the gravity tank will automatically take effect. Water and air is supplied to the pressure tanks by means of a duplex pump, and a Gardner Rix air pump is located in a special house on the roof. These are operated by a fifteen horsepower electric motor.

A sensitive electric alarm is connected with the pressure tanks and when the air pressure falls below, or rises above, a certain pressure, or the level of the water falls



Specially electrically-operated conveyor at China Basin warehouse

below or rises to a certain height, an alarm is sent into the American District Telegraph Company, which turns in a fire alarm.

The Southern Pacific warehouse is equipped with a machine shop and carpenter shop. In the machine shop may be found drill press, lathe, shaper, emery stone, etc., operated by an electric motor. In the carpenter shop there are two planers, two saws, one power driven wood drill, etc. Repairs are made on all machinery, elevators, coffee and bean mills, trucks, trailers for trucks, etc.

The Southern Pacific building is equipped with four electric elevators, two being of 2-ton capacity and two of 2,500-lb. capacity. There are also Brown portable conveyors, and piling machines, throughout the buildings.

There is also a special garage for the motor trucks, and trailers, and electric trucks. There are five large electric trucks which are capable of carrying six tons each. These are used in making long hauls between the docks and warehouses. A special board for charging the batteries of the electric trucks is installed in the Southern Pacific Warehouse. As the batteries of each truck are fully charged they are automatically shut off. It requires from eight to nine hours to charge each truck. This is taken care of by the night watchman. Gasoline for the motor trucks is stored in a subterranean tank of 172 gallons capacity, and the portable pump is kept in the engine room when not in use.

At the Overland warehouse there is a large unrestricted building for storing of hemp, kapok, oils, copra, and other inflammable merchandise. Storage is also supplied here for tractors and other machinery. Large quantities of tobacco are carried to the Overland, which is devoted principally to storage of general merchandise in large lots.

The Humboldt warehouse is used largely for storage of general merchandise. A large section of this plant is devoted to customs bond. A novel feature is the overhead track which runs the entire length of the building, from the spur track to the front of the building and extends several feet over the driveway. By means of this, heavy machinery can be easily unloaded from the cars and delivered within the building; or by means of the extension over the driveway, machinery can be loaded from the car or from the warehouse to trucks.

The Haslett Company operate a warehouse at Mission Rock, which is located in the bay along the southern part of the water front. This is about a half mile from the mainland, and steamers can unload directly to the warehouse. Three ships can unload at one time. There are about four acres under cover. The principal commodity carried here is canned salmon. The salmon are brought to San Francisco on the various sailing vessels at the

close of the canning season, unloaded at Mission Rock, where they are stored, and later shipped out by steamer, or car. As many as 130,000 cases of salmon are brought here on one vessel. As many as 500,000 cases of salmon have been stored at Mission Rock at one time.

When salmon is to be shipped out on cars, the empty cars are brought alongside the warehouse on car floats. The cases are loaded onto the cars by gravity rollers, and trailers operated by small tractors. All cases above the fifth tier are delivered to the cars by gravity rollers, and the last five tiers are loaded onto trailers, and pulled alongside the cars by the tractors. The gravity rollers are given a 4 per cent grade. They are carried on special wooden horses which are adjustable for height. By this method, ten men can handle from 5,000 to 6,000 cases of salmon a day, either to or from the warehouse. Brown

conveyors are also used extensively at this warehouse.

The Haslett Company operate two barges and a motor launch in connection with the Mission warehouse.

The Associated Terminal Warehouse Company operates extensive warehouses at China Basin, which is at the extreme southerly part of the San Francisco water front. It also operates Piers 29 and 31; and the Sacramento Valley Dock & Warehouse at Sacramento.

Some time ago this company acquired the complete list of Sacramento Valley warehouses that had been operated by the Sacramento Northern Railroad. The line of warehouses, thirteen in number, extending from Sacramento to Chico, will be operated in conjunction with the warehouses of the Associated Terminals in San Francisco at China Basin and Piers 54, 29 and 31.

One direct result of the ownership by the Associated of the valley warehouses will be the elimination of the middleman to the farmer in marketing his commodity. Instead of selling to the middleman in this particular

territory, the farmer now will be enabled to sell direct to the trade, the product being handled from the valley point by the Associated San Francisco.

Another factor of great interest to the farmer in this consolidation is that the valley bankers, in dealing with a San Francisco warehouse form of established rating, will the more readily grant advances to the producer on warehouse receipts. Also the farmer will be more easily enabled to secure proper advances on his commodity or crops. The entire plan also means a speedy and more economical transfer of the valley commodities to the distribution centers in San Francisco.

Growers of rice, beans and grain will be particular beneficiaries of this new arrangement which, however, will be of service to all valley growers who sell in the San Francisco market.

Regarding mechanical equipment of the Associated

'FRISCO AS AN INDUSTRIAL TERMINAL

Allen Hoar, of the Naval Civil Engineer Corps, and who is attached to the Public Works Department at the Mare Island Navy Yard, has made a study of topographical conditions in relation to the part which San Francisco should logically play in the port's development as warehousing and trans-shipment center for both national and world commerce. Mr. Hoar summarizes as follows the requisites for San Francisco as an ideal industrial terminal district:

1. Harbor sites with control of sufficient adjacent territory for possible extensions
2. Low cost of waterfront development
3. Piers, transfer sheds and warehouses properly designed to meet the conditions and equipped with freight transferring, assorting and distributing machinery.
4. Sufficient area for comprehensive trackage system for classifying, shifting and storing
5. Rail connections to all State and trans-continental lines, including belt lines throughout the district and to all tributary territory.
6. Cheap water, power and sanitary conditions.
7. Sufficient back area to establish manufacturing lofts under control of the terminal.

"The development of San Francisco as a warehousing point," Mr. Hoar says further, "can be assured of taking to itself a vast amount of such commodities as sugar, coffee, tea, vanilla, rice and spices from South America, Central America, the Hawaiian Islands and the Orient."

Terminal warehouses at China Basin, it may be stated that system, order and efficiency are impressed upon one who enters these plants. This impression grows as one watches piece after piece and ton after ton of freight move by with ease and rapidity.

The usual method of hand trucking is employed between wharf and warehouse, but in the interior of each building the hand truck gives way to efficient methods.

The system operated by this company embodies the use of the most modern machinery. The belt conveyor replaces the hand truck; the old style hoisting method is replaced by the portable elevator; the old, inefficient method of piling by hand is done away with by the piling machines.

The belt conveyor used consists of a 24-inch specially prepared belt running over a series of rollers set every four feet on the upper side of the frame. The rolls on the under side, which are for the purpose of taking up the sag, are spaced every twenty feet, the whole being suspended eighteen feet above the floor. Three of these conveyors are used in this group of warehouses, each conveyor being 420 feet in length and operated at a speed of 250 feet per minute, by a five horsepower two-phase motor. On top of the conveyor and adjustable to any point on its length is mounted a tripping arrangement which is for the purpose of unloading material at any desired point. When in full operation this machine, with nine men, will handle from 1200 to 1400 sacks or cases an hour, any distance along its length; whereas, if the old method of hand trucking were employed it would require from forty to fifty men to transfer an equal amount of material the same distance within the same period of time.

Adjustable along the length of the conveyor are the portable elevators, which are similar in construction to the conveyors, the belt being replaced by two chains twenty-four inches apart, and joined together by rods. These rods act as carriers and prevent the material from sliding back while being transferred from the floor to the belt conveyor. A three horsepower two-phase motor is used to drive each elevator, which operates at an angle of about thirty degrees.

Long Belt Conveyors

Following the material along the conveyor one is curious to know the method used in unloading. This is the duty of the tripping arrangement, which consists of a portable frame mounted on tracks running along the conveyor by means of which the belt may be inclined a few feet at any desired point. Material upon reaching this level is diverted by an adjustable arm to either the right or left into spiral chutes, from which it is discharged at any desired location. From this point it is either piled to await shipment, or loaded direct into cars by means of the Brown piling machine. The machine is similar in construction to the portable elevator, the difference being that it is shorter, having a length over all of eighteen feet, with table adjustments to any angle above ten degrees, and is driven by a two horsepower two-phase motor, receiving its power from various plugging boxes at different points throughout the building. These warehouses are reported to be operating the longest belt conveyors in California—models of up-to-date labor-saving methods.

One of the accompanying photographs shows one of the portable elevators which convey material from the floor to the belt conveyor. Near the upper end of the portable conveyor, and attached under the conveyor, is an electric motor that operates the chain. The lower end of the portable conveyor, when in operation, rests on the floor; but when the portable conveyor is to be moved from one point along the belt conveyor to another, the lower end of the portable conveyor is raised to a horizontal position, and held in that position by two pieces of timber extending from the frame work above. Power for moving the portable conveyor along the length of the warehouse is obtained by a small electric motor, which is operated from the floor of the warehouse by means of the ropes extending down from the upper framework.

Other Warehouses

The North Point warehouse and the Dod warehouse are located near the north water front, about one block from the Embarcadero. The Dod warehouse has a storage space of 60,000 square feet, and the North Point warehouse has a storage space of 57,000 square feet on the first floor, with spur tracks accommodating fourteen cars. These warehouses handle large quantities of imports from the

Dutch East Indies, such as rubber, coffee, tea, etc. They are less than two blocks from the Java Pacific steamer lines, over which a large percentage of East Indian products are carried. These warehouses also handle large quantities of tobacco. At one time they averaged 150 cars per month. The tobacco is stored here until vessel space is obtained. The Dod warehouse company operate an extensive fleet of motor trucks, for handling the products

The total storage space of the various Haslett warehouses is as follows:

No. 2	141,000 sq. ft.
No. 3	25,000 sq. ft.
No. 4	50,000 sq. ft.
No. 5	151,000 sq. ft.
No. 6	155,000 sq. ft.
No. 7	98,000 sq. ft.
No. 8	57,000 sq. ft.
No. 9	33,000 sq. ft.
No. 10	95,000 sq. ft.
No. 11	66,500 sq. ft.
No. 12	46,000 sq. ft.
No. 13	66,000 sq. ft.

between docks and warehouses, and freight depots.

Extensive warehouses are maintained by the Continental Warehouse Company, De Pue Warehouse Company, Turner Whittell, and several other concerns.

It may be of interest to know something of the system of fire protection that has been installed by the City of San Francisco. This system was installed to guard against a conflagration similar to that which followed the earthquake in 1906. The system is known as the high-pressure system, and is said to be one of the most efficient of any city in the world.

The area protected exceeds eight square miles, or nearly double the burned area. It includes the warehouse district, the industrial, business, and a large part of the residence districts. Due to the city's irregular topography it was necessary, in order to secure fairly uniform pressure in both the high and low lying districts, to divide the protected area into two zones, each supplied from a separate and independent reservoir. Both zones, however, can be connected with the main supply reservoir.

The warehouse district lies in the low zone. The two reservoirs supply water at an average pressure of 150 pounds to the hydrants in their respective zones. By cutting the zone in which the warehouses are located into the reservoir normally supplying the higher zone, an average pressure of 210 pounds can be obtained at the hydrants of the warehouse zone. Finally, an average pressure of 300 pounds and a maximum of 329 pounds can be got in the warehouse zone by utilizing the direct head of the main reservoir, with capacity of 10,000,000 gallons.

Editor's Page

Warehousemen and the Convention of Distributors

ATENTION is called to "Stumbling Blocks," the series of letters written by traffic managers and warehousemen and which begins in this issue. Here are being set forth viewpoints which are conflicting and which will be modified only through conciliation.

How is that conciliation to be brought about? The answer can be summarized in one word. That word is *co-operation*.

The instrumentality for this co-operation is the proposed national association of the manufacturers' representatives who handle warehouse accounts. Once organized, this body will have its members attend the annual conventions of the American Warehousemen's Association and the American Chain of Warehouses. There the "stumbling blocks" will be discussed. The certain outcome will be the conciliation that is necessary to push aside these "blocks." The "blocks" are the problems that can and will be solved satisfactorily when both sides become parties to an endeavor to standardize forms and practices.

It is the man of narrow vision, the man who

is an obstructionist, who will not now work actively to promote the successful launching of the new association at the convention to be held in Chicago next month. It is every warehouseman's duty—moreover it is his privilege—to communicate with every distribution manager whom he knows, call his attention to this convention, and urge him to attend and to join. The live wires in the industry are already doing this, for they learned at Cincinnati last December the value of obtaining personal acquaintanceship with the manufacturers' representatives who distribute through their warehouses.

Mr. Keenan and Mr. Lovejoy, respectively president and vice-president of the American Warehousemen's Association, have through their splendid efforts of co-operation set the example for the other men in the storage industry. Let those others follow.

From the traffic and distribution executives who are founding the new association comes this message to every warehouseman:

"Roll up your sleeves and get to work. Help remove the 'stumbling blocks.'"

Is Your Warehouse Listed As a Risk?

THE figures prepared by the National Board of Fire Underwriters and presented on Page 32 serve to emphasize the wisdom of the adoption of a policy of co-operation by the warehousing industry toward the campaign which the Board is conducting to reduce the danger of fire in storage plants of all types. Reduce that menace and automatically the insurance companies will begin quoting lower rates.

How many warehousemen have any idea

whether their buildings are so equipped as to approach the ideal? Those who do not know, who have indeed not given thought to this subject, which is one of the most important to-day in the industry, can gain the knowledge they ought to have and can do so readily by getting in touch with the Board's officials. This they can do by communicating with *Distribution & Warehousing* on any specific problem they have in mind in relation to hazardous conditions in their plants. We are your clearing house, specially designated for that purpose, dedicated to that end, by arrangement with the Board.

What can we do to help *you*?

READERS' FORUM

DISTRIBUTION & WAREHOUSING will welcome receipt of letters from men in the warehouse and distribution fields who have something worth while to say for the benefit of others. Communications of this character should be addressed: Readers' Forum, Distribution & Warehousing, 239 West 39th Street, New York City

"HE WHO SERVES BEST, SERVES SELF"

Editor, *Distribution & Warehousing*.
New York, N. Y.

Dear Editor:

I read with a great deal of interest the report on the Cincinnati meeting of the traffic managers and warehousemen, and cannot refrain from taking some exceptions to remarks by some of the traffic boys.

ALL warehousemen are not alike; we know one concern (Yours Truly) that takes as much pride and care in looking after our customers' interests as if all goods were our own. We handle from 15 to 20 carloads a month, and each car is looked after individually, and if anything is broken, or short in count, a report is immediately made to R. R. Freight Agent, and copy sent to consignor; notations are made on freight bills so as to help consignors in filing claims, and any other assistance given that will help them straighten out any tangles. We keep a correct record of all seals on car doors, and when goods are damaged or ruined by oils, etc. (as have been), we immediately stop all unloading until consignor or consignee is notified, so as to help get matters adjusted. We do not unload first and then talk of looking into the claim end of it; we consider the time to act is when the car arrives, and when anything is wrong, to call the freight agent over and let him see conditions as they really exist. We get quick results that way. We always work with our customers and for their interests. We have at least half-a-dozen accounts who store with us, and if any one desires to purchase anything from their stock we obtain prices by advising we have calls from "So and So" and help sell, as many times their agents are not on the spot to do so. In many cases we are never paid for this extra service, and do not look for it; our aim is to help, as such service always brings back good results. We follow this motto: "HE WHO SERVES BEST, SERVES SELF." . . . and we find it pays.

If a shipper desires to know when a car arrives, we advise him at once; if not so requested, we unload and advise him when work is all finished.

Regarding the remark that the warehouseman that stores is not always the best one to handle their goods, we must disagree with that party. In many instances pooled cars come in for distribution (and should be called JUMBLED

cars instead, as no consignment is intact or together, some on one side of car, some in each end of car). In that event, the man who has the warehouse to lay those shipments out so as to get them together, and get a correct check on the goods, is the man who can handle such cars to the best advantage, and get better results; he is less apt to have errors than the fellow who backs up to a car and begins to pick out for each party. Many times cars come in for three and four different parties; and if each one is to call for his goods and do his own carting, nine times out of ten the fellow who calls first is the one who should have come last, as his goods are back of the other fellow's. Thus the man with the warehouse can give better service.

We do not wait for pooled cars to come to us; we are always looking after them. We are more than delighted to see that the traffic managers will form an association and work with the warehousemen. Then the fellow who gives them the service will have a chance to be talked about.

Respectfully yours,

JOS. BIMBERG SONS,
Elmira, N. Y. per Nathan Bimberg.

"FLAT RATES"

MADISON, WIS., Feb. 26, 1920.
Distribution & Warehousing,
231-241 West 39th Street,
New York City.

Dear Editor:

In the February issue of your magazine we were very much interested in reading the article under the heading of "Flat Rate for Service."

Our warehouse contains 1,000,000 cu. ft. of storage space. We are making it the distribution center for southern Wisconsin, and are ourselves distributing under both the flat rate and the separate charge plan, but are bringing more of our accounts into the former system, as we find it very much simpler from the standpoint of the warehouseman and that it gives much greater satisfaction to the customer.

In our case the flat rate proposition presupposes one kind of service; that is, that goods are received in carload

lots and shipped by freight in L.C.L. shipments, and when handled in this way the flat rate proposition has presented only one difficulty or unfairness other than those usual in storage accounts.

The one objection we have found is that the tendency is to make the flat rate on an average of 30 days' storage, while in running an account, the amount of stock carried is often equal to much more than this.

This, however, is a point that can be worked out as familiarity with the requirements are learned and strongly approve of the flat rate plan of charging for commercial storage.

Yours truly,

THE UNION TRANSFER & STORAGE CO.
Robert M. Jenkins, President.

We Correct an Error

NEW YORK, Jan. 23, 1920.
Distribution & Warehousing.
Class Journal Company, U. P. C.
239 West 39th St.,
New York City.

Gentlemen:

We notice in your January issue, on Page 51, you state that Charles & Company of New York have purchased from this company a warehouse on East 41st St.

The property which we sold consisted of a stable, for which we had no use as we changed our equipment from horse drawn vehicles to electric.

Will you please correct the statement, and oblige,

Very truly yours,
JOHN G. NEESER,
President.

Would Limit Truck Measurements

ALBANY, N. Y., March 3—A bill prohibiting operating or driving on public highways of New York State, outside of cities, of an auto truck or trailer having a width of body, inclusive of load, of more than 8 ft. and a gross height of more than 12 ft. 6 in., or having a combined weight of truck and load of more than 25,000 lb., has been introduced in the Legislature. Trucks hitherto registered or re-registered under section 282 not conforming to these provisions would be exempt during the period for which they were registered. The present law applies only to trucks and trailers having a combined weight of truck and load of more than 25,000 lb.

FROM THE LEGAL VIEWPOINT

By George F. Kaiser

Mr. Kaiser is a practicing lawyer who makes a special study of warehousing and transfer affairs. Service given in this department is free. DISTRIBUTION & WAREHOUSING cannot agree to answer all questions, but will do so as far as is possible.

When the Warehouse Watchman Helps to Steal, Who Is Responsible?

EEDITOR, *Distribution & Warehousing*: In reply to your letter to us regarding the theft of sugar from our warehouse, we certainly do appreciate the way that you are handling this matter for us and also the attention that you are giving it.

Now, then, we had a watchman here at the time that the sugar was stolen, but, unfortunately, this watchman is the man that helped to steal and sell this sugar, and he has run away.

Also, wish to mention to you that we have signs printed and hung in our warehouse that read: "We are not responsible for any theft from this warehouse. This applies to storage of all description."

Our customer was so informed at the time that he placed his order with us for the storage of this sugar. We told him that we would store this sugar only at his own risk as regards the safety of same.

Now, as the matter stands, we have told you in detail just what the situation is. Also for future use, is there any form that a warehouseman can draw up that would protect him against theft loss? If so, please forward us at once a copy of some such form.

As far as the point of negligence is concerned, we will say to you that we believe that we have not been negligent in keeping someone here to watch the place, as we at all times had the watchman here, but as previously stated, he himself was connected with this theft. *U. T. Co., Youngstown, Ohio.*

ANSWER: A warehouseman is liable for loss of goods by theft, etc., if the loss was due to his negligence or other fault, but not otherwise. The only negligence that could be attributed to you in this case would be the fact that you employed a watchman who turned out to be dishonest. If

you used the proper degree of care in employing this watchman and in investigating his reference I do not believe that you would be held to be negligent. In a case of this kind the persons who have the final say as to whether or not a warehouseman was negligent are the jurors to whom the question is referred when the case comes to Court.

I do not know how you can exempt yourself from liability for theft, as it would undoubtedly be construed as an effort on your part to relieve yourself from your own negligence. If you are a public warehouseman you cannot contract to exempt yourself from your own negligence.

BURDEN OF PROOF

WHEN an automobile is stolen from its place of storage the burden is on the person who stored it to show that he is free from negligence, it was held by the Supreme Court of Minnesota in a recent case. On June 10, 1918, an automobile was received for storage and a receipt was issued for it. That night thieves entered the place of storage, stole the automobile, and when the owner demanded it the next morning he was advised it had been stolen. The Court decided that the finding of a jury that the man was negligent was proper, saying:

"Where a loss occurs under such circumstances as are here disclosed the burden is on the bailee to show that he was free from negligence; that is, that he exercised such care to keep the property safely as a prudent man would ordinarily exercise under such or similar circumstances.

"This place of storage was 100 ft. by 120 ft. in size and fronted on two streets, at the intersection of which it was located. In one end of the building partitions had been erected

so as to provide an office, a stockroom which opened into the office, and a small repair shop. The remainder of the building was used for storage purposes and there is testimony that it was full of automobiles and trucks on the night in question. Defendant had a so-called night man who went on duty at 1 o'clock in the afternoon and remained until midnight or a few minutes later, and who was required to see that the windows and doors were closed and locked when he left. Defendant had no one at or in charge of the storage place during the remainder of the night. There were two wide doorways through which automobiles could be taken in or out. At night these doorways were closed by sliding doors which were fastened on the inside by iron hasps hooked into staples in the wall. These hasps could be easily unhooked and the door opened at any time by any person inside the building. When the theft was discovered on the morning of June 11, one of these doors was found unfastened and a window in the back of the garage was found open. There was evidence from which the jury could find that this window had been left open by defendant's employees, and that the thieves entered through it. They broke open the door to the stockroom with a bar or jimmy and took all the tires and tubes therein. They also took two automobiles, including the one belonging to plaintiff.

"Defendant contends that the verdict was excessive. The only evidence as to the value of the automobile was the testimony of plaintiff and the testimony of one witness presented by defendant. The jury took the value as fixed by the plaintiff and there is nothing in the record from which we can say that they were not justified in doing so." (*Steenson v. Flour City Fuel & Transfer Co.*, 175 N. W. 681.)

New Cleveland Warehouse Co.

CLEVELAND, March 20—The Scott Bros. Fireproof Storage Co. has been chartered with a capital of \$10,000 to conduct a storage business. The incorporators are O. L. Scott, T. J. Moffett, N. B. Madden, M. E. Getchell and O. E. Schultz.

Divergent Viewpoints Regarding

National Furniture Warehousemen's Association

Opponent and Proponent Opinions as Expressed in Letters to *Distribution & Warehousing*

THE path of the organizers of the new National Furniture Warehousemen's Association is not strewn with roses. A number of household goods storage executives who have for years been members of the American Warehousemen's Association are strongly hostile to the movement.

The thought of these opponents is that the furniture warehousemen of the country will enjoy more benefits through affiliation with the household goods subdivision of the American Warehousemen's Association than by identifying themselves with the National Furniture Warehousemen's Association. As one of the household goods warehousemen—a member of the A. W. A.—phrases it in a letter to *Distribution & Warehousing*, the advocates of the furniture organization are “excavating and fitting up a new channel, running parallel to the one already built.”

In an effort to place, in an unbiased way, the situation before the warehousemen of the country, *Distribution & Warehousing* submitted to Ralph J. Wood, secretary of the Illinois Furniture Warehousemen's Association, and one of the proponents of the new body, the copies of the texts of two letters which this magazine has received recently from two household goods men who are members of the A. W. A. These two communications bespeak loyalty to the older organization and express at length the criticisms which the writers have to make regarding the new movement. *Distribution & Warehousing* felt that it was fair to both sides to present the viewpoint of each and to let our readers draw their own conclusions.

The names of the writers of the letters opposing the new association are on file with this magazine. The writer in each instance asked that his communication be published anonymously. Mr. Wood's reply is, at his request, published with his signature. It is interesting to note that Mr. Wood in his letter identifies H. L. Halverson, of the Boyd Transfer & Storage Company, Minneapolis, as the author of one of the opposing communications. The latter read:

LOYALTY TO “JIMMIE” KEENAN

“I HAVE just been reading the February issue of the magazine which, by the way, I want to say seems to improve from month to month. I was much interested in the account of the National Furniture Warehousemen's Association's discussion at the New York Furniture Warehousemen's meeting, as this morning's mail brought the circular letter of this Association, dated March 1, with application blank.

“The arguments for the National Furniture Warehousemen's Association as expressed in this circular seem to be two. First: to provide a vehicle for the national expression, representation, activity and prestige. Second: to reduce the expense to warehousemen, both in time and money—now incident to membership in several warehouse organizations.

“As to the first reason, it occurs to me in thinking over the matter that the A. W. A. provides (or under its constitution and by-laws is entirely capable of providing) to the fullest degree national expression, national representation, national activity as fully as the new association . . . and national prestige greater than the new association can hope for for many, many years.

“Regarding the second point, it still seems desirable, even necessary, to re-

The writers of two of these letters are antagonistic to the formation of a national association of furniture warehousemen, on the ground chiefly that they believe that this branch of the industry would obtain wider national representation through the household goods subdivision of the American Warehousemen's Association.

The writer of the third letter—Ralph J. Wood, Chicago—gives a detailed history of the movement to organize the National Furniture Warehousemen's Association, which is to hold its first meeting in July. Mr. Wood's purpose is to point out that the plan has the approval of a majority of the household goods warehousemen of the country. His communication was written in accordance with instructions given him at a meeting, on March 15, of the Illinois Furniture Warehousemen's Association, of which he is secretary.

tain our membership in the A. W. A., the N. Y. F. W. A., the I. F. W. A. and the Southern F. W. A. We are still paying dues in all, and none has yet notified us that it is going to discontinue associate membership. Each association apparently is going to do this when the other associations have done so.

“If we join the National Association our dues will be increased by \$75, to a total of \$145. Now we are paying \$40 for the A. W. A.—\$10 each for the other three, making \$70 in all. Our time and expense for travel to meetings will apparently be greater, rather than less—by reason of the new association, if we wish to keep in close touch with our brethren.

“Is there any real prospect of the expenses for dues and for meetings decreasing by the plans proposed by the National Association? Not soon, certainly. Consider dues. We belong to four associations now, and our dues are \$70. If we join the National and cut out the four others we belong to, our dues will be \$75, or \$5 more than at present. However, we would not want to resign from the A. W. A. in any case, so our expense for dues will be increased by \$45 permanently; and for a year at least—and possibly for several—the increase would be \$75. Consider time and the expenses for traveling to meetings. All the associations will undoubtedly hold

their meetings as usual this year, and perhaps for years to come, until some one of them takes the initiative and drops associate members. In addition to these meetings, there will be the two meetings of the new National Association—one in mid-summer and one in winter.

"Altogether I conclude that the chances for any economy resulting from the organization of the new association are about as good as Wilson's chances for a third term.

"My thought turns again to the A. W. A., with our own well beloved Jimmie Keenan as president, with its household goods sub-division, having complete freedom of action, and I wonder why we cannot all turn our energy into this channel, already constructed and in use, rather than to go to the labor and expense of excavating and fitting up a new channel, running parallel to the one already built."

"THE TRUTH AS WE SEE IT"

The Second Opponent Letter Reads:

"THERE is, perhaps, no question facing the warehousemen of the country to-day regarding the subject of organization that is more important than the proposed new National Furniture Warehousemen's Association. If you are interested in associations at all we believe the discussion which follows will interest you.

"Let us say in the first place that, although we are going to speak frankly, we do so with nothing but the heartiest good will toward those who are promoting this new association. When a move of such importance to all is being made, however, it is only the part of fairness to all that we understand the facts clearly. In presenting our understanding of the question we do not act in any official capacity. We represent only ourselves—no officer and no committee of any association. We have no axe to grind. We are looking for no notoriety. We are telling the truth as we see it solely for the good of the warehouse business throughout the country.

"A number of our fellow warehousemen engaged in the storage of household goods have conceived the idea of organizing a new national association of warehousemen who store household goods. They have met and have adopted a constitution and by-laws. They have secured the approval of meetings of the Illinois, New York, New Jersey and Pennsylvania associations, and their agreement to drop their associate memberships. The dues have been fixed, as we understand it, at from \$50 to \$75 per year; application blanks for membership are being gotten out, and the warehousemen of the country are to be invited to join this new association.

"Now you know, and we know, that there is already in existence a national association of warehousemen capable of giving to household goods warehousemen all the advantages of co-operation

and centralized effort they may desire. How well fitted is the American Warehousemen's Association to do this we will show later. The first question that naturally arises is, 'Why not use the organization we already have, rather than form a new one?' Again: 'The machinery of the American association is already in running shape and functioning properly. Why create new machinery that will not be in working order for several years and discard that which we already have?' Still again: 'The American association has acquired a fine reputation, with great influence, in the courts and legislative halls of the country. Why cast this aside and go over the ground again in a new association?'

"This idea of the National Furniture Warehousemen's Association started chiefly among the men who were active in the Illinois association. Some years ago a paper was read at New York at a meeting of the American association recommending that each state association drop its associate membership and that the American association be made the one national association. Committees were appointed, we believe, to try to work this out. When the question came before the Illinois association, however, those present went on record against turning their associate members over to the American, and later meetings went on record as favoring the new National association. How did this come about and what were the reasons at the bottom of it?

"Study the action taken in almost any organization or at almost any meeting. You find something like this: About 10 per cent or less have familiarized themselves with the question and take the leadership in favor of it. About an equal number are also familiar with it and part of them oppose it, but the rest do not care to register their opposition. The other 80 per cent are either unfamiliar with the question, or are too indifferent to care which way it goes simply voting with the side that seems the stronger. 'Let George do it' has defeated more worthy movements than active opposition ever did. That, in our judgment, is what has happened on this question. The leaders seemed to want this new association badly. The majority said, without thoroughly considering all phases of the subject, that, if they wanted it so badly, let them have it. That is why an affirmative vote on a question at any meeting *does not always mean that the majority are in favor of it*. We maintain that only a small number of warehousemen really feel that this new association is wanted, but they got these votes and are actively pushing the matter because they are determined to have their way.

"Those who are pushing this new association will tell you perhaps that the American Warehousemen's Association does not give the household goods members a full voice in its affairs or enough attention in its activities—that the merchandise members get chief use of the machinery of the association. They want their money to go more to the household goods end of the association

and not devoted so much to other sections. We have only to say that at the New York meeting, above noted, it was voted to practically separate the American into three associations, household goods, merchandise, and cold storage. This has been done and now each section has its own chairman, uses most of its own money, has its separate meetings at conventions, and retains only enough affiliation with the other sections to get what value there is in working with them and to co-ordinate effort on questions of general interest.

"They may say that the Illinois association, which is a household goods organization, is larger than the household goods section of the American; that the Illinois must be more efficient in its service to members; that the new National association is to continue along the line of the Illinois, and therefore they do not wish to transfer their associate membership to the smaller and less efficient American association's household goods section. We answer to this that of our own knowledge the Illinois was not of more service to its members except by virtue of its larger membership. And it was larger, partly because its meetings were in a central location, but largely because they had some mighty good advertisers behind it. The American has finally awakened to this fact, although we are frank to say they have been rather late in doing it.

Where the Gain?

"We do not believe it would wrench the pride of the Illinois members to join the American any more than it would to join a totally new National association. The great majority of those composing the American association in the household goods section are also members of the Illinois; and both, therefore, are our own associations. We believe the other Illinois members who do not belong to the American are hard-headed business men enough to thrust sectional pride aside for the sake of united and more efficient action. To get an accurate view of the situation, one might ask what will be gained by the new association that is not found in the American Warehousemen's Association. Let us take up these questions one by one.

"To have the control of the association in the hands of the household goods men? We have pointed out that this is already a fact with the household goods sub-division of the American under the revised by-laws.

"An efficiency expert, or cost accounting study, particularly for household goods members? This has already been started and the success of the work depends only upon the interest and backing of the members. The Central Bureau Committee of the household goods sub-division met recently in Atlantic City to formulate detailed plans to this end.

"Meetings entirely for household goods members? We already have a separate session at the American convention and it could easily be arranged to have one or more special meetings in the summer or at any other time—lasting as long as

desired—devoted entirely to household goods business.

"Decrease duplication of effort? This is entirely dependent upon the Illinois, New York and other associations divorcing themselves from associate members, and, as it is part of the program of the new association to have this done, it could just as readily be done if the concentration of effort was made under the auspices of the American association. Indeed, if this new association is formed and the American continues to operate, the new association will have created a more definite duplication of effort than is now the case.

Regarding Dues

"More revenue from the dues to be devoted entirely to the household goods interests? Many who have studied the question, although necessarily in a cursory way, are confident that more revenue will be available, working under the American association, than would be the case under a new organization. In other words, that proportion of our dues that is now devoted to the general association would be offset, or more than offset, by the proportion of the dues in the new organization that would be required for what might be called overhead expense.

"Decreased expense to members? Some might find it so, but with most of us it would not mean decreased expense to form this new association. We would still retain membership in the American association and the sum total of our present associate membership dues would hardly be as much as the substitution of the dues of the new association.

"A larger organization? Last year J. F. Keenan, acting alone as chairman of his membership committee, added scores of new members to the American and showed plainly the possibilities of a further increase by the use of active methods. Would it not be much easier to induce warehousemen to join the American Warehousemen's Association—with its quarter-century of achievement and prestige—than to join a new organization, provided the new association did not sacrifice its necessary income by fixing dues much lower than those in the American?

A. W. A. Is "Workable"

"A paid secretary devoting his entire time to the industry? There is no reason why this cannot be done under the present scheme of organization of the American association. Indeed, if we remember rightly as to the plans outlined at the Cincinnati convention, that is exactly what is planned. It is simply a question of paying for his services and that is what would be involved in the new National association.

"It is plain, then, that from the standpoint of workableness, the American Warehousemen's Association offers to the household goods warehousemen of the country a machinery of organization already in existence, functioning smoothly and capable of expanding its activities to as great an extent as we wish. That the household goods members are ably represented in the affairs of the general

association is assured by the fact that J. F. Keenan of Pittsburgh, whose efficient work in getting new members has already been noted, is now president of the American Warehousemen's Association. We, ourselves, think that under George S. Lovejoy's administration the household goods men received as much attention as they would take; but if there is any feeling that the merchandise section was getting more than its share of attention, Mr. Lovejoy has removed any reason for it by requesting of members that a household goods man be elected, expressing a wish that he be not nominated again.

"One word further regarding the advantages of affiliation with the American association. Many of the household goods men are interested also in merchandise or cold storage and would wish to retain their membership in any event. How much better for such members especially to combine the three departments of the warehouse business in one organization like the American so that one convention would cover the whole field. This alone is an all-sufficient argument against the formation of the new National association.

A "Mistake"

"Now the organizing of the National Furniture Warehousemen's Association seems to us to be a mistake for this reason: We all recognize the value of local associations dropping their associate memberships and having one nationwide body. It is obvious that there cannot be two thoroughly efficient, nationwide organizations of household goods warehousemen, both of which are formed for the same purposes, without duplication of effort and expense—the very thing we want to get away from. The fact that the American association is working along national lines in its merchandise and cold storage sections, holding its conventions which will be attended by a multitude of household goods warehousemen, means that there will be a constant demand for a household goods section of the American association and for a household goods program at conventions. Yet if this new National association is a success, it cannot fail to prevent the full success of the American. On the other hand the importance of the American will always prevent the full success of the National, for level-headed business men are not likely to allow continued and unnecessary duplication, and the tendency will be to join one or the other and not both.

"It seems to us—and we wish that the courteous and diplomatic language that is necessary to express only good will could yet carry a more convincing meaning—that the organization of this new National association is very unwise. We do not doubt the good intentions of those who are actively promoting it, but we cannot think that they have adequately considered how unnecessary it is—and a thing that is unnecessary should not be allowed to go on. The reasons they give for the formation of the new body are those that are answered above, and we cannot think that the household goods

warehousemen of the country will back them up in so illogical a move—and we repeat that it is our belief that any votes taken do not yet express the real wish of the majority. We asked those who are pushing this matter to allow a referendum to be submitted to the household goods warehousemen of the country, but they preferred to take votes at different meetings as indicative of the sentiment of all. We remind you that the Minnesota Warehousemen's Association has not expressed an opinion on this matter, nor has the Canadian association had a presentation of the matter, although many of their members are also members of the American. The Central Warehousemen's Club refused to allow time for presentation of the matter and, since the leading members are quite familiar with the movement it cannot be considered as anything but unfavorable to it.

"Finally, those launching this new association will not allow a referendum. Now if the new association doesn't get members it cannot start. While we regret with all our hearts to see a matter in which a number of our fellow warehousemen are greatly interested killed and their efforts come to naught, we earnestly hope that you will help kill this movement. If we are mistaken in our position and it develops that the majority of the warehousemen of the country are thoroughly in favor of it, even with the understanding that it will probably divide the interest of the warehousemen with the American—neither having a full success—then we shall certainly sign an application and hope to be admitted to membership. If we are correct in our belief, however, we hope to see the great majority of warehousemen return the application blank to the sender, with only this comment: 'We think the American Warehousemen's Association could handle this as well or better than a new association.'

"As we said, with no axe to grind, representing no officer or committee, we hope to see the warehousemen of the country, engaged in the storage of household goods, do away with this new National association by refusing to join it."

THE LETTER FROM MR. WOOD

"I AM in receipt of your favor of March 8 in which you enclose copies of letters received by you in reference to the National Furniture Warehousemen's Association. One of these I have not seen heretofore. The other, written by H. L. Halverson of the Boyd Transfer & Storage Co, Minneapolis, Minn., has been sent to all members of the various associations.

"I can only say that Mr. Halverson's letter is a palpable misstatement of facts and is either made for personal reasons or through ignorance. Inasmuch as it has not been the custom of the Boyd Transfer & Storage Co. to be represented at the meetings of the various associations, with the exception of the American Warehousemen's Association, they apparently know very little about what has been going on in household

goods circles, though they might have obtained information by reading the monthly and annual publications of the various state organizations, had they thought it necessary to be posted.

"The idea of a national warehousemen's association was not started 'chiefly among men who were active in the Illinois Furniture Warehousemen's Association,' but was the result of a demand made by a majority of the warehousemen of the country for full participation in a strictly household goods association, as will be explained later on. Mr. Halverson's statement that it was a matter of 'let George do it' is an insult to the intelligence of the warehousemen of America.

History of Movement

"The following statement is a matter of record in the published reports of the various associations and can be easily verified.

"The question of a national association of household goods warehousemen was first brought up by C. A. Aspinwall of the Security Storage Co., Washington, D. C., at the 1916 meeting of the Illinois association held at Cedar Point, Ohio, in June of that year. At that meeting Mr. Aspinwall read a paper entitled 'The Future of the Warehouse Associations.' At the conclusion of his able paper, B. S. Hurwitz of the Westheimer Warehouse Co., Houston, Tex. offered a resolution which carried, 'that the presidents and secretaries of the different associations confer upon the matter during the year and present a definite report at the next summer meeting.' Pursuant to such resolution committees from the New York, American, Southern, and Illinois associations and Central Warehousemen's Club met at Chattanooga, Tenn., in February, 1917, formulating plans for an amalgamation with the American Warehousemen's Association, and a report was made at the summer meeting of the Illinois association held at Green Lake, Wis., in June, 1917, at which were present 137 warehousemen from all sections of the United States. After report was made a resolution was offered by Newton R. Frost of the Ballard Fireproof Storage Co., St. Paul, Minn., seconded by W. R. Kissick of the Neal Fireproof Storage Co., Cleveland, 'that it is the sense of this body that a national organization of furniture warehousemen independent of all other organizations is to be desired.' This resolution was carried unanimously and the committee was ordered continued with this end in view. At the New York meeting in July of the same year the same question was brought up and their committee was ordered continued.

Action Last June

"The matter then slumbered until December, 1918, when a letter was received by the Illinois association from P. J. Mills, White Line Transfer & Storage Co., Des Moines, Iowa, asking that the associate membership be given a voice and vote in the affairs of the association and representation on the board of directors. In compliance with this request

a committee consisting of Mr. P. J. Mills, chairman; Mr. C. J. Hamilton of the Security Storage & Trust Co., Baltimore; and Mr. E. M. Bond of the E. M. Bond Fireproof Storage Co., Nashville, Tenn., was appointed to devise ways and means to change the by-laws of the Illinois association providing for representation, such report to be made at the annual meeting in June, 1919.

"The question came up before 203 warehousemen from all sections of the United States and after a great deal of discussion Mr. L. H. Tanner of the Central Storage of Detroit, Mich., offered a resolution: 'I move you that it is the sense of this meeting that there should be a national organization of furniture warehousemen, and that a committee of five be appointed to consider the matter and report back to this meeting.' The motion was seconded by Mr. A. B. Compton, Lincoln Fireproof Storage Co., Dayton, Ohio, and carried unanimously. The president appointed Mr. P. J. Mills as chairman; W. Lee Cotter, Cotter Transfer & Storage Co., Mansfield Ohio; E. M. Bond, Southern Association; Charles S. Morris, secretary New York association; Homer Duffy, Pacific Coast association; Buell G. Miller, Pennsylvania association, and R. J. Wood, secretary, Illinois Association, to act as such committee.

Conference Resolution

This representative committee met and reported back the following resolution: 'That the secretary of the Illinois Furniture Warehousemen's Association be instructed to call a conference of committees from each present State or regional household goods association, if they are in favor of the proposed plans, to confer for the purpose of formulating constitution, by-laws and scheme of operation for a national household goods warehousemen's association; that each association be invited to send an accredited committee of not more than three members to represent it; the time and place of such conference to be set by the secretary of this association after determining the convenience of all concerned.' The adoption of this resolution was moved by Mr. L. H. Tanner, seconded by Mr. T. Y. Leonard, Leonard Warehouses, Inc., Detroit, Mich., and was unanimously carried.

"The various associations signified their interest in the proposed plan and appointed committees as follows: W. C. Reid, Charles S. Morris, James F. Keenan, for the New York association; William T. Bostwick, T. L. Morton, Charles Milbauer, for the New Jersey association; Buell G. Miller, Charles G. Wightman, Walter P. Sweeting for the Pennsylvania association; C. J. Hamilton, Charles H. Kaufman, for the Baltimore association; E. M. Bond, T. F. Cathcart for the Southern association; Col. Frank Shellhouse, for the Indiana association; F. L. Bateman, M. H. Kennelly and R. J. Wood, for the Illinois association.

"A conference was called at White Sulphur Springs, W. Va., Dec. 5, 1919. There were present at that meeting W. C. Reid, W. C. Gilbert, James F.

Keenan, W. T. Bostwick, T. L. Morton, Charles Milbauer, Charles G. Wightman, Buell G. Miller, Walter P. Sweeting, E. M. Bond, C. J. Hamilton, C. H. Kaufman, Col. Frank Shellhouse, F. L. Bateman, M. H. Kennelly, R. J. Wood; and also C. A. Aspinwall, W. Lee Cotter and W. R. Matthews, representing the American Warehousemen's Association, which had been invited to send a committee. This conference prepared and adopted a constitution and by-laws for a new association to be called the National Furniture Warehousemen's Association; elected temporary officers and an executive committee consisting of James F. Keenan, Walter C. Reid, F. L. Bateman, Charles S. Morris, E. M. Bond, M. H. Kennelly and R. J. Wood to carry on preliminary organization work and perfect plans for the first meeting to be held the second Friday in July, 1920, subject, of course, to ratification by the various associations.

Ratifications

"The Illinois association ratified the proposed new organization Dec. 15, 1919; the New Jersey association Jan. 14, 1920; the New York association Jan. 19, 1920; Pennsylvania and Southern associations Feb. 11, 1920, and Pacific Coast association Feb. 23, 1920. The Central Warehousemen's Club sent no representatives to the White Sulphur conference for the reason it considered itself primarily a merchandise association. With this exception all associations have voted to amend their by-laws eliminating their associate membership. With the Illinois association this becomes effective June 1, 1920.

"On Feb. 4 the Boyd Transfer & Storage Co., through Mr. Halverson, wrote asking that the formation of the proposed national association be submitted to a referendum. This could not be done at that late date for the reason that three of the largest associations had already ratified the new organization, and why, with the expressed wish of the majority of the warehousemen of the country, should such action be rescinded by special meeting or otherwise at the request of one concern—the Boyd Transfer & Storage Co.?

"Mr. Halverson's lengthy appeal was mailed Feb. 27, 1920. His statement regarding dues in the new association is incorrect. They were fixed at from \$25 to \$75 per annum, subject to discussion at the first meeting. The constitution and by-laws of the new association were published complete in the December, 1919, *Journal* of the Illinois association. The Boyd Transfer & Storage Co. received a copy of that publication; therefore they cannot plead ignorance.

"In closing, let me say that Mr. Halverson's letter is to a great degree a misstatement of facts. The household goods warehousemen have by a large majority indicated their desire, on several different occasions, for a purely household goods organization and the formation of the new organization is the result of their express wish.

"Yours very truly,

"R. J. Wood."

MOTOR TRUCK and RAILROAD FREIGHTING

by

W. J. L. BANHAM

*General Traffic Manager
Otis Elevator Company*

THERE seems to be no question at the present time that the carrying of less than carload shipments to short-haul points by the rail carriers is not only expensive to the shippers, but is also unprofitable to the carriers. Until recently it seemed to be almost necessary for the shippers to use the rail carriers for the movement of their less than carload shipments to nearby points, regardless of expense and delay, as there did not seem to be any organized effort made by the motor truck operators to take care of this class of freight.

It is extremely difficult for the carriers to figure cost of transportation of package freight hauled short distances and particularly to those points at which they do not have a through car movement. The expense of transferring the less than carload shipments one or more times when moving within fifty miles of the receiving station, and the additional expense caused by delay of equipment, has been recognized by the Government, with the result that the United States Railroad Administration during the war ruled that freight destined within a certain radius would not be handled by the rail carriers. It was necessary, therefore, for the shippers to find other means of transporting this class of freight. Motor truck transportation, while still in its infancy at the present time, pointed a way to the shippers whereby their less than carload shipments could be handled not only more promptly but at a considerable saving both to the shipper and to the receiver of freight alike.

While it is true that it is almost impossible for the carriers to figure the exact cost of handling short-haul

freight, it is equally as difficult for the shippers to ascertain the cost of transporting similar freight. The question of costs brings me to the first part of my subject, and in order to make it clear as to what I mean by costs and what these costs cover, I am going to refer to them as transportation costs. Transportation costs do not necessarily mean less than carload freight rates and mo-

Users of motor trucks should consider to what extent they can be operated in competition with short-haul freight movement. The principles involved are: First, service; second, cost.

tor truck rates, although both rates are a part of the transportation costs.

What I understand to be a true transportation cost is all expense involved in making a shipment, starting with the boxing or packing expense, together with handling expense in the shipping department, the loading of freight on teams for delivery to the freight house, teaming charges from the shipping department to the local freight house, and additional labor incidental thereto. To this must be added the less than carload freight rate and additional charge for cartage at the delivery point, with such other expenses as may be caused by requests for tracing, duplication of shipments lost or damaged in transit, entering of claims, checking of freight bills, delay to shipments in transit, and the expense of carrying additional stock to take care of freight in transit when moving via rail carriers.

All of these costs are properly transportation costs and are part of the shipping expenses which are paid either by the shipper or receiver.

If you will make an analysis of the charges covering your shipments it will be of interest to you to know the amount it costs to make less than carload shipments, and if you will compare these costs against the same shipments moving via motor truck, you should be in a position to eliminate a number of the cost items, by reason of the fact that it is not necessary to go to the same expense for packing or boxing freight shipments when moving via motor truck, inasmuch as there is usually no transfer in transit.

For the information of truck users I have compiled some figures showing the cost of freight movement, compared with the same movement via motor truck. These figures are worked out on an average basis.

In practically every instance it is necessary to prepare material for freight shipment in an entirely different way than if it moved via motor truck direct from the shipper to the receiver. It is necessary to go to considerable additional expense for boxing or crating, or to protect by other means, in order to prevent loss or damage in transit. This additional packing expense is necessary on account of the number of handlings the less than carload shipments receive at the hands of the teamsters and carriers after the material leaves the shipping department.

We have included in the freight cost the first class rate plus 30 cents per hundred pounds teaming charges at shipping and receiving point. To these costs must be added 17 per cent

for the cost of carrying the increased weight caused by heavy boxing, and 24 cents per hundred pounds for the increased cost of boxing. The rate via motor truck covers delivery from the shipper's warehouse to the receiver's warehouse. I have averaged this rate, and believe it to be a fair one to use in comparison with the freight cost movement.

Trucks vs. Freight Car

The rates that I worked out are based on Newark. I understand that in the freight cost item are included the various items that I have referred to, such as additional crating, additional labor, and so on. I find on shipments moving from Newark to Yonkers that if we combined all the costs, that is, additional costs, to make a less than carload shipment, the rate averages a dollar per hundred. If you take the same movement by motor truck with decreased boxing, decreased weight and decreased labor, you will find that the rate averages \$.20. Between Newark and Yonkers there is a difference of \$.80 per hundred pounds, in favor of the motor truck.

The following table gives cost differences for varying distances:

	Motor Freight Truck Cost		
	Road per 100 Miles	Lbs. per 100	Lbs.
New York City.....	12	\$.88	\$.15
Passaic, N. J.....	6	.88	.15
Paterson, N. J.....	10	.88	.18
Trenton, N. J.....	51	.88	.55
Philadelphia, Pa...	88	.98	.75
Bridgeport, Conn..	70	1.12	.75
New Haven, Conn..	87	1.12	.85
Providence, R. I...	214	1.21	1.15
Port Jefferson, L.			
I., N. Y.....	71	.98	.75
Asbury Park, N. J.	46	.94	.45

I have quite a number of other figures, but those explain themselves, and they average about the same all the way through.

One of the greatest savings made possible by motor truck transportation is that of lumber and other material used for packing, together with additional labor and other charges incidental thereto. The amount of this saving, however, will be controlled largely by the material to be boxed or packed, and how much less protection can be used when moving via motor truck as against a less than carload movement via freight.

While some will save more and others less, depending upon product to be shipped and conditions, the great possibilities of saving warrant careful study of the problem.

Have you taken into considera-

tion the amount of material you have in transit which is not producing any revenue, either to the shipper or receiver, while it is in the hands of the carrier?

Have you considered the amount of space you use in your shipping department in order to prepare your shipments to move via freight?

Have you considered how much less space you need in your shipping department if you can materially reduce the amount of boxing and packing used on your shipments?

Have you considered the amount of lumber it is necessary for you to carry for boxing, the space necessary to store it, and the amount of freight charges you pay on wet lumber, if it is stocked in the open, as is usually the case? Boxing lumber will frequently carry from 10 per cent to 25 per cent of its weight in moisture, unless it is passed through a dry kiln before being used for boxing purposes.

Pertinent Questions

Could you not use any space which can be saved by changing your shipping methods for manufacturing purposes?

Have you considered the amount of material and money your company has tied up, by reason of the fact that you are unable to state definitely how long it will take to deliver by freight between your factories and your customers?

If a freight movement takes thirty

days as against one day via motor truck, would it not be to the advantage of your company to use the difference in time, twenty-nine days, for manufacturing?

Have you considered the amount of expense to manufacturers and others for storing and handling their products on account of uncertainty of freight delivery?

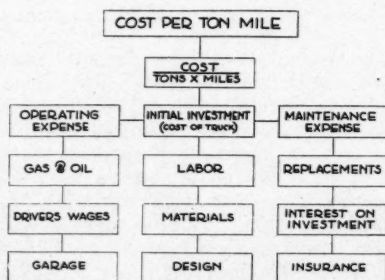
Any comparison between rail carrier movement and motor truck movement is entirely in favor of the motor truck, as it is necessary for the motor truck operators to make delivery in the shortest possible time in order to operate their equipment financially successfully.

Organization Needed

What is needed at the present time is organization on the part of the motor truck operators, in order to secure heavier loading and eliminate as far as possible motor trucks returning without a full load.

In general, I am of the opinion that motor truck transportation can, and should, compete successfully with the carriers to short-haul points. The delivery time is all in favor of the motor truck, and I am satisfied if the manufacturers will take into account all the various costs and charges which are part of a true freight transportation cost, that motor trucks can be operated successfully in competition with the carriers for distances of between 10 and 125 miles.

"COST PER TON MILE"



A TERSE phrase which accurately defines the basic standard for determining the maximum performance of the motor truck has found its way into general usage among truck owners and operators.

It is "Low cost ton mile."

This phrase sums up in four words all the elements which enter into the building, purchase and operation of a motor truck and gives the owner a comprehensive standard by which he may determine the results obtained in direct ratio to his investment.

The further to aid owners in estimating truck performance, the Garford Mo-

tor Truck Company has prepared a chart designed to indicate graphically the fundamentals which enter into truck operation.

This chart has for its initial heading, "Cost Per Ton Mile." The first subdivision is the "Cost," figured in tons times miles. This in turn is divided into three subdivisions, as follows: (1) Initial investment (cost of truck); (2) Maintenance expense; (3) Operating expense.

In figuring the initial investment there are more things to be considered than the mere cost in dollars and cents. Chief among these things are the design, the materials used in the truck's manufacture and the labor (workmanship) upon that truck.

Entering into the maintenance are replacements, interest on the investment, and insurance. In determining operating expense oil and gasoline, the driver's wages and garage rent are the important items to be given consideration.

Study Cost Accounting

"Know Your Business!"

WOOL WAREHOUSE REGULATIONS MAY BECOME EFFECTIVE WITHIN SIX WEEKS

WASHINGTON, March 24—Information based upon the recent hearings in relation to the proposed Federal regulations for wool warehouses under the United States Warehouse Act was given to-day to *Distribution & Warehousing* by George Livingston, chief of the Bureau of Markets of the Department of Agriculture, in response to inquiries. The arguments which warehousemen advanced in opposition to being placed under Federal supervision were set forth in the March issue. The inquiries were made with a view to acquainting the industry with the situation as it stood at the conclusion of the series of hearings held in many parts of the country.

"It is very likely," Mr. Livingston said, "that certain provisions of the tentative regulations which were used as a basis of discussion during the hearings will be changed materially before the final regulations are adopted. Just what these changes will be I am not prepared to say. It is also impossible to state with any degree of certainty when the regulations will become effective. It is hoped, however, that they may be completed and published within the next month or six weeks, and it is expected that they will become effective immediately after being promulgated.

"With reference to the attitude of the wool trade to the Act, it might be stated that comparatively few warehousemen participated in the hearings. Wool dealers, however, at Chicago, Boston and Philadelphia expressed opposition to the Act and attempted to show that it was unnecessary and unworkable.

"On the other hand, at Columbus, Ohio, representatives of wool growers—officials of the Ohio Wool Growers' Association—attended the hearings and were very much interested in the possibility of utilizing the Warehouse Act as a means of assisting them in co-operatively marketing their wool. It was their belief that, in order to be of the greatest service to them the Act should be amended in one respect, and it is my understanding that their interest in the matter was so great that a committee representing the wool growers in Ohio and nearby States appeared before the Committee on Agriculture of the House of Representatives and requested such an amendment.

"Other interested parties in other parts of the country felt that the Act holds possibilities of service to them. Our hearings were conducted in the wool producing and handling centers, for the purpose of obtaining suggestions with reference to the proposed regulations which would make the Act more serviceable to the wool trade as a whole, and due consideration is being given to all the suggestions made.

"I wish to direct your attention to a condition which apparently is overlooked

These five points are emphasized by the Bureau of Markets regarding the Department of Agriculture's proposed regulations for wool warehouses under the United States Warehouse Act:

1. There is absolutely no authority for the Department to fix storage charges.
2. There is no conflict between the United States Warehouse Act and the Uniform Receipts Act.
3. The Federal Warehouse Act is entirely permissive—warehousemen will be licensed only upon their own application.
4. Many growers and others are anxious to have licensed and bonded warehouses established under the Act.
5. Objections have been raised to standardization of other agricultural products, but these objections have proved to be without substantial foundation.

in some quarters, namely, that the United States Warehouse Act is in no sense compulsory, but is entirely permissive. It authorizes the Secretary of Agriculture to license warehouses for the storage of wool and certain other agricultural products. No warehouseman will be licensed under the Act except upon his own application and upon his conforming to the requirements of the Act and the applicable regulations. A warehouseman, after being licensed, will be required to operate his warehouse in conformity with the United States Warehouse Act and the regulations thereunder, and will be allowed to do business as a Federally licensed and bonded warehouseman. Consequently, it is hardly correct to refer to the Bureau's activities under the Act as an attempt to "regulate" wool warehousemen. The Act and the regulations, I repeat, will be applied to no warehouseman in the absence of his voluntary request."

Calling attention to several inaccuracies in published reports of the recent hearings, Mr. Livingston said:

"Apparently it is assumed that the Government will fix uniform charges for storing and handling wool. It is my understanding that on several occasions during the progress of the hearings questions were asked as to the Department's intentions with reference to such charges, and that in every instance it was explained that the Department had no authority and no inclination to fix uniform charges, or, indeed, any charges whatever for storage. The Act prohibits a licensed warehouseman from making exorbitant and unjust charges for stor-

age, and the only authority the Department has with reference to this matter is to see that exorbitant and unjust charges are not made. In every case where this matter was discussed, it was explained that the Department realized that a charge which might be exorbitant and unjust at one point might be entirely reasonable at another point.

"It is stated also that the Warehouse Act conflicts with the Uniform Receipts Act, which is in effect in about forty States. This statement also is incorrect. One particular purpose kept in mind in drawing up the United States Warehouse Act was that it should be practically operative in the States having the Uniform Receipts Act. In fact, the Act makes specific provision against conflict with State laws and provides for co-operation between Federal and State officials. I direct your attention to Section 29 of the Act."

This Act reads: "That nothing in this Act shall be construed to conflict with, or to authorize any conflict with, or in any way to impair or limit the effect or operation of the laws of any State relating to warehouses, warehousemen, weighers, graders, or classifiers; but the Secretary of Agriculture is authorized to co-operate with such officials as are charged with the enforcement of such State laws in such States and through such co-operation to secure the enforcement of the provisions of this Act; nor shall this Act be construed so as to limit the operation of any statute of the United States relating to warehouses or warehousemen, weighers, graders, or classifiers now in force in the District of Columbia or in any Territory or other place under the exclusive jurisdiction of the United States."

Mr. Livingston continued:

"I may add, as a matter of record, that the Federal Act has been in effect for some time with reference to cotton warehouses and that no conflict with State laws has developed.

"With reference to objections to the standardization of grades of wool made by dealers in Boston, Philadelphia and Chicago, it may be stated that objections of the same nature have been raised to standardization of other agricultural products. It has been variously said that standardization was unnecessary, unworkable and even impossible, and yet many of the most important products have been standardized and the established standards are in general use by the trade, even by people who in the beginning maintained the gravest opposition to standardization.

"It is believed that, notwithstanding the present feelings of some dealers against standardization, no sound reason has been advanced why wool cannot be standardized."

Trucking Co. in Columbus

COLUMBUS, OHIO, March 18—The Economy Trucking Co. has been chartered with a capital of \$10,000 to operate a transfer concern. The incorporators are M. J. Cannon, K. Cannon, D. F. Cannon, C. C. Cannon and H. C. Butler.

COTTON WAREHOUSE PLANS ARE DEFERRED

Union Corporation Will Postpone Operations Owing to Bond and Realty Conditions

ATLANTA, GA., March 12.—Postponement of the plans of the Union Warehouse Corporation for the erection or acquiring of cotton warehouses in Columbia, S. C.; Augusta, Ga.; Charleston, S. C.; Charlotte, N. C.; Spartanburg, S. C., and eighteen other Southern cities is indicated in a statement that has just been made by Boston officials of the company. The statement discloses also that the corporation will proceed to complete the purchase of desirable warehouse sites at Augusta, Spartanburg and seven other Southern cities at once.

Two reasons are given by Rufus R. Wilson, president of the company, why the operations of the company are temporarily deferred. These are: First, the condition of the bond market; second, the excessive cost of building operations and the exceptionally high prices being asked by present warehouse companies for their properties. Mr. Wilson stated that about \$150,000,000 of new financing is being held up by unfavorable conditions in the investment market. Present building costs are so high, he said, that a financial burden would be imposed by immediate construction that would make impossible profitable operation in the future.

He further advised that a new company is to be formed known as the United States Warehouse & Terminals, Inc., with \$10,000,000 of preferred stock.

One of the largest warehouses to be erected by the company, and, in fact, one of the largest cotton warehouses in the entire South, is planned for Atlanta, a site having already been obtained and surveyed by engineers.

No Posts for this Warehouse

SAVANNAH, GA., March 12.—The first of a series of big warehouses of a new mode of construction to be erected throughout the country by the Loose-Wiles Biscuit Company, has been opened here. The new structure is said to be the only building of this kind in the South. Unlike most warehouses there are no posts under the roof to block the passageways and take up space—the roof is supported by a scheme of English wooden trusses. The outside of the building is of brick construction, and the interior floor is of oak. There are four offices in the building, one each for the sales agent, the cashier, the shipping agent and the salesmen who travel the Southeastern territory for the company. The salesmen's room is in reality a lounging parlor and one of the features of the building. The windows are numerous throughout the structure and electric lighting is thereby reduced to a minimum.

It is because of the fact that the Southeastern territory has led the company in gross sales that Savannah, where the headquarters is located, was se-

lected for the first warehouse of the series it is planned to construct. Similar warehouses, it is said, will be built by this company at its various distributing centers throughout the country, all of them to be of the same design and construction as the building at Savannah.

Germany's Warehouses Packed

NEW YORK, March 13.—Irving T. Bush, head of the Bush Terminal Co., found the warehouses of Germany filled with merchandise, he said upon his return to-day from Europe, where he visited England, France, Belgium, Holland and Germany. Discussing the land of the Huns, Mr. Bush said:

"We went to the occupied territory first and then drove about 300 miles through Germany proper, including the city of Frankfurt, but did not go to Berlin. I had been informed there was no merchandise in Germany, but I found the warehouses packed with it everywhere I went."

The \$3,000,000 Bush Terminal building, which is to occupy an entire block in the heart of London would be completed within a year, Mr. Bush asserted.

TO ALTER SHIPYARD INTO RAIL TERMINAL

PHILADELPHIA, March 4.—Developments of interest to warehousemen are foreshadowed through the announcement that the Government is to take over the Hog Island shipyard. The Government will hold title for about six months and the officials of the United States Shipping Board plan to have the property within its control by mid-summer, through a holding company capitalized at \$26,000,000. The shipyard will then be converted into a great rail and water terminal and general repair yard, with warehousing as part of the structural improvements.

Commercial and industrial interests of this city had hoped to purchase the shipbuilding plant to convert it into a huge terminal, somewhat similar to the Bush Terminal in Brooklyn, and a committee recently was appointed, headed by Alba B. Johnson, president of the Chamber of Commerce, to confer with local trade bodies and bankers and railroad officials regarding the proposition. Mayor Moore had expressed a willingness to meet the committee more than half way. The plan was to purchase the plant, turn it into a terminal and thus block purchase by foreign interests, which were reported to be appraising it. The terminal was to have been a combination series of warehouses, drydock, shipbuilding yard and factory center with a network of railways.

\$100,000 Cold Storage Plant

JOHNSTOWN, PA., March 1.—The firm of Goenner & Co. is building a storage warehouse for ice, to cost \$100,000. The plans permit the easy addition of extra units of construction, all fireproof. This is a provision against ice shortage, from which Johnstown suffered last summer.

STORAGE ACTIVITY NOTED IN COLUMBUS

COLUMBUS, OHIO, March 23.—Activity has characterized the warehouse and storage business in Columbus during the past month. With the opening of the spring season, after a most severe winter, goods started to move actively and indications point to an active movement of all kinds of merchandise during the coming few weeks at least. March has been considered more active than either January or February, which are usually considered the slowest months of the year.

Storing of general merchandise is being done to a considerable extent at this time. This includes canned goods, coffee, cereals, and general groceries. In fact the storage at this time is much heavier than was the case a year ago. Another important item of storage is motor cars. Wholesalers and dealers have been receiving considerable quantities of cars, many of which have been stored. The movement of such machines out of storage has already started and will gain in strength as the spring advances.

The freight transfer business has been brisk. This is shown by reports received from the local transfer concerns, which have been extremely busy. The transfer business has included groceries and general merchandise, agricultural implements, canned goods and household goods.

Household goods storage is one of the big features of the business in Columbus.

Death of Peter Sommer

PEORIA, ILL., March 6.—The Keystone Steel & Wire Company has sent out cards announcing the death of Peter Sommer, vice-president and founder of the company, at St. Petersburg, Fla., on February 16. Mr. Sommer, who was 77 years old, was known to many of the owners of warehouses through which the Keystone firm distributes its products.

Would Oust Government

PHILADELPHIA, March 4.—Proceedings to compel the Government to vacate the land at the foot of Oregon Avenue, where a \$15,000,000 Army base was built during the war, have been started in Common Pleas Court No. 4 by the Greenwich Real Estate Co. This land was requisitioned by the Government in July, 1918, and the complaint states that the Government has not paid one cent to the owners of the property. The court is asked to treat the Government as any ordinary trespasser by summarily restoring the property to its owners.

The proceedings are of special interest to warehousemen, because space is exceedingly scarce in this city at this time and the property, which consists of warehouses and piers, is desired by the city on leases.

STUDY COST ACCOUNTING

"Know Your Business!"

NEW TARIFFS TO BE FILED IN MINNESOTA

Warehousemen Are Preparing Revised Schedules—Mutual Bonding Arrangements Effected

MINNEAPOLIS, March 13.—Minnesota warehousemen, working under the control of the State Railroad and Warehouse Commission, are preparing new merchandise storage tariffs which will be filed with the commission as soon as completed. The principles recommended by the Committee on Standardization of Basis for Rates of the American Warehousemen's Association have been followed in this work, and these tariffs will show a separation of the handling and storage charges. The handling charges will, in the main, range from \$1 to \$2 a ton, although on some special commodities and under some conditions a higher rate will be charged, amounting in some instances to \$4 a ton.

The requirements of the state in the matter of license and bonding of warehouses are being handled by a mutual arrangement among the storage men in which nearly all unite in a joint bond for one another. This plan has been considered and approved by the state authorities and accomplishes several desirable objects. The warehousemen are through this method relieved of the expense which would attach to furnishing separate security bonds, the cost of which would range from \$100 up. Under the mutual arrangement each of these companies pays \$50 into the treasury of the State Warehousemen's Association and in this way a considerable fund has already been accumulated. Incidentally the arrangement is considered to have greatly increased the feeling of friendly interest on the part of the members, and has worked toward co-operation in other matters of mutual interest.

Chicago Cold Storage Men Organize

CHICAGO, March 12.—Cold storage warehousing interests here have formed a local organization to be known as the Refrigeration Association of Illinois. Virtually every warehouse in Chicago doing a cold storage business has become affiliated with the new body, which was formed at the suggestion of M. C. Cummings of the Chicago Cold Storage Warehouse Co., and a member of the Cold Storage Sub-Division of the American Warehousemen's Association. Robert J. Douglas has been elected president; Charles Nelson, vice-president; J. T. Brady, secretary; and M. Uhlman, treasurer. Standardization will be one of the problems discussed at the meetings.

Working Day Shortened

MINNEAPOLIS, March 15.—The household goods transfer and storage business in Minnesota was placed on a nine-hour a day basis, effective to-day. Heretofore there has been a ten-hour basis. Moving rates were increased to compensate for this reduction in hours.

The new rates are \$2.50 an hour for a horse-drawn van and one man and \$3.50 an hour for motor vans and one man, to which is added 75 cents an hour for each helper. Packing rates are \$1 an hour.

Seattle Organization Formed

SEATTLE, WASH., March 15.—The Seattle Warehousemen's Association has established headquarters and has selected Henry J. Gorin as secretary. Mr. Gorin is a lawyer at 329 Central Building, Seattle.

Montana Convention

BILLINGS, MONT., Feb. 14.—The Montana Transfer & Storage Men's Association held its third annual meeting here to-day. Officers were elected as follows: President, W. E. Baker, Baker Transfer & Storage Co.; vice-president, W. B. Haggerty, Wilbur Transfer & Storage Co.; secretary-treasurer, Adolph Wacker, Fidelity Storage & Transfer Co., Missoula. The next convention will be held at Great Falls in February, 1921.

FOUR NEW MEMBERS ELECTED TO A. W. A.

PITTSBURGH, March 16.—Announcement of the following new members to the American Warehousemen's Association is made by Charles L. Criss, general secretary:

Hansen Storage Co., Milwaukee. Affiliated with general merchandise sub-division. Operates these warehouses, seven of which have railroad trackage. Handles general merchandise, yard storage, transferring, forwarding, etc. Guido J. Hansen is president.

Mollen Transfer & Storage Co., Binghamton, N. Y. Affiliated with general merchandise sub-division. Handles all lines except cold and bonded storage. Company is partnership of Charles Mollen and Joseph F. Mollen.

Merchants & Manufacturers Warehouse Co., Atlanta. Affiliated with merchandise sub-division. Engaged in general merchandise storage and distribution. Warehouse is located on trackage. Company is partnership of E. L. Bishop and Henry Gullatt.

Cincinnati Tobacco Warehouse Co., Cincinnati. Affiliated with merchandise sub-division. Operates warehouses containing approximately 300,000 sq. ft. of storage space. Engages in handling both tobacco and general merchandise. W. H. Whiteman is president.

Study Cost Accounting "Know Your Business!"

New Providence Warehouse

PROVIDENCE, Feb. 6.—A new terminal warehouse plant is to be built on the waterfront here. While the structure will be given over mainly to handling and storing the great bulk of cotton destined to pass through this port, it will be prepared to facilitate also the movement of goods in foreign and domestic commerce. The proposition has the support of the Providence Chamber of Commerce.

THE WAREHOUSEMAN AND THE MOTOR TRUCK

NEW YORK, March 9.—"Because of unavailable transportation equipment valuable import cargoes from all over the world are being piled up on piers at Atlantic seaport cities," says Sidney Bowman of the Sidney B. Bowman Automobile Company, New York Kissel distributor.

"These cargoes consist mostly of valuable raw materials such as wool, hides, cotton, etc., and should be warehoused as soon after their arrival as possible.

"This is only another indication of the need of motor trucks when such extremely valuable imports as noted above are dumped on the piers and left there because there are not enough transportation facilities to convey them to the points where they can be properly warehoused or stored. It can be seen that it won't be long before motor trucks will be as hard to order for immediate delivery as passenger cars are now. It behooves every business man to carefully check up his transportation equipment and provide now for the future requirements to take care of any possible business expansion later on."

Sissers Announce Expansion

SOMERVILLE, N. J., March 2.—Sisser Bros., Somerville, N. J., warehousemen and transfermen, with offices and receiving stations in New York, Plainfield, N. J., and Philadelphia, have purchased a two-story brick building in Plainfield, N. J. This building, now a garage, will be converted into a storage warehouse and express receiving station. Sisser Bros. opened an office and receiving station in Plainfield in August, 1919, to take care of their business at that point, and the demand for storage space, together with the need of a place to keep their trucks in Plainfield, made necessary the purchase of this building.

"Sample" Warehouse Proposed

PHILADELPHIA, March 1.—A central sample warehouse in which merchandise manufactured in Philadelphia can be displayed to buyers from other cities is urged by Mayor Moore.

"Philadelphia is the point of origin for many products," said the Mayor, in an address to the Philadelphia Wearing Apparel Salesmen's Association, in the Bellevue-Stratford. "A central depot is needed. We have schemes in view now that will bring results. There is absolutely no reason why buyers from other cities should go to other centers to see products made here."

Coming:

An article on the distribution possibilities of the New York State Barge Canal.

WAREHOUSEMEN MEET RAILROAD AGENTS

Storage Executives in Cleveland Obtain Credit Extensions from Freight Officials

CLEVELAND, March 8—Cleveland warehousemen and the freight agents of the various railroads entering Cleveland met to-night at the Cleveland Athletic Club and a number of questions of importance were discussed, as follows:

First, itemizing and checking of articles on carload lots as well as less than carload lots. Second, unification of bills-of-lading by all railroads. Third, importance of packing right.

No definite conclusions were arrived at but the discussion served to bring out the points that are in the minds of the warehousemen in their relations to the railroads.

A fourth problem was considered and a conclusion arrived at. That is, the Cleveland warehousemen asked for credit on the shipping of household goods from this city to other cities. This was granted them by the railroad men at this meeting. In order now for a Cleveland warehouseman to ship a load of furniture or household goods from Cleveland to Chicago, for example, he does not have to pay the freight in advance; he may merely guarantee his payment. This great assistance by the railroads helps the warehouseman very much in that he does not have so much money tied up for two or three or four weeks before it is paid him by the shipper at the other end.

New Cartage Company

CLEVELAND, March 22—The South End Cartage Co. has been chartered with a capital of \$10,000 to do general transferring. The incorporators are J. H. Morris, S. R. Driffield, M. Beck, A. Fleischer and M. H. Ford.

Increased Capitalization

CLEVELAND, March 22—Papers have been filed with the secretary of state increasing the authorized capital of the Fireproof Storage Co. from \$10,000 to \$100,000. The increase was necessary to provide for the building of an addition to the warehouse.

Storage Situation in Kansas City

KANSAS CITY, MO., March 17—Kansas City warehouses are nearer full than they have ever been, and it is said that many consignments cannot be received and that manufacturers are eager to send into this territory. The condition is due to the hesitancy of jobbers to receive shipments for stock direct from factories, the jobbers leaving the manufacturers to ship stocks to Kansas City warehouses for filling later orders by jobbers. This hesitancy springs from a sense of uncertainty over the demand which retailers will make on the stocks, although retail trade has felt no serious

slowing-up in the past few weeks. Retailers, too, are ordering in smaller volume from jobbers. Nobody wants to take the chance on laying in heavy supplies, and the duty goes back to the manufacturer of getting the estimated needs of the territory into Kansas City, where it can be quickly handled as consumption requires. The warehouse capacity is about full and already orders are being turned down for space.

N. Y. Association Approves Federal Bill

ROCHESTER, N. Y., March 4—Approval of the cold storage bill introduced in the United States Senate in February was approved by the New York State Cold Storage Association at its meeting here to-day. This measure was prepared after Congress had been flooded with protests against a previous bill, the opponents including the cold storage subdivision of the American Warehousemen's Association, which suggested at its December convention in Cincinnati a number of changes designed to eliminate features which the industry considered objectionable. Hearings on the new bill are yet to be held.

At the convention to-day the New York body adopted resolutions suggesting changes in the proposed cold storage legislation in New York State. This State bill was approved subject to the amendments offered by the men assembled here.

Addresses were made by Charles L. Criss, Pittsburgh, general secretary of the American Warehousemen's Association; R. H. Switzler, St. Louis; and F. A. Horne, New York City, all identified with the A. W. A. plans to develop cost accounting in warehouses.

The convention elected F. M. Shoemaker, Elmira, president, and A. A. Reeves, Rochester, secretary-treasurer. Mr. Shoemaker was chosen chairman of the executive committee.

Distributing Corp. Absorbs Trucking Company

NEW YORK, March 23—Announcement is made by the United States Distributing Corporation of the formation of a subsidiary known as the United States Trucking Corporation—consolidation of twenty-seven trucking firms in the New York metropolitan district with a capitalization of \$2,000,000 8 per cent preferred stock and with 80,000 shares of common stock. The parent body has acquired 41,000 shares of the trucking corporation's stock.

New Indianapolis Warehouse

INDIANAPOLIS, March 18—Erection of a fireproof warehouse with 398,000 square feet of space has been begun by the Armstrong Transfer & Trucking Company. Eight freight and one passenger elevator, all of the "operatorless" type, such as those in use at the Bush Terminal plant and the Brooklyn Army Base, both in New York, are to be installed.

WAREHOUSE CO. PAYS \$10,000 PIER RENTAL

BOSTON, March 10—It is disclosed at a public hearing to-day that the New Bedford Storage Warehouse Co. pays for its present lease on the State pier at New Bedford \$10,000 annually on a three-months agreement. John M. Cole, Commissioner of Public Works, said an understanding existed that the lessee would endeavor to develop the pier as a transportation factor rather than for storage purposes.

The hearing was before the joint legislative committee on harbors and waterways. The committee has under consideration a bill under which the Department of Public Works of Massachusetts would have control of all State piers. At the hearing to-day an amendment was prepared by the department providing that notice should be given to the New Bedford municipal authorities before any lease would hereafter be made. New Bedford representatives at the hearing declared that this amendment made the bill less objectionable, as it would preclude sale or other disposition of the pier without the knowledge of the public or city officials in New Bedford.

Purchase of Columbus Company

COLUMBUS, OHIO, March 17—William E. Hague and Charles F. Cohagen, who have been associated with the Columbus Terminal Warehouse Company since its organization, announce they have severed all connection with that firm and that they have purchased the stock, good will and accounts of the Merchandise Storage Company. A statement issued by the purchasers says that with their new interests "they will spend their time and energy in the active management of the business in an effort to render the sort of service" desired by customers.

"Moving Day" Reform Sought

NEW YORK, March 20—New York moving van men, in seeking to avoid a repetition of last October's moving day troubles, are actively agitating among real estate owners, brokers and agents a movement to change the prevailing custom which makes the vast majority of apartment leases in New York City expire on Oct. 1. The moving men offer as a solution to the great congestion on this day the change in the leasing schedule that would make more terminate on Sept. 1 and Nov. 1 in order to equitably distribute the annual moving day burdens.

Arthur J. Morgan of Morgan & Brother, who is a director of the Van Owners' Association of New York and of the New York Furniture Warehousemen's Association, declared to-day that ordinary common sense business methods warranted the change.

Southern Warehouse Construction

An authority on industrial activities estimates that eighty-one new warehouses were being constructed in the Southern States during February.

WAREHOUSING TO BE CONVENTION KEYNOTE

Speakers at Meeting of American Cotton Association Will Discuss Storage Facilities

MONTGOMERY, ALA., March 17.—The annual convention of the American Cotton Association at Montgomery, Ala., which has been twice postponed for unavoidable reasons, has now been definitely scheduled for April 13 to 16 and will undoubtedly be held on those dates.

This is destined to be one of the most important conventions in the history of the association, and will, in reality, be more than national in its scope. Broad economic measures of reform in the future baling, handling, warehousing and marketing of the cotton crop will be discussed by those in attendance, who will include some of the biggest men in the world in the cotton industry.

The immediate construction of adequate warehousing facilities in every cotton growing county of the belt will be the most vital subject of reform for 1920 upon which the convention will concentrate its time and attention. The governors of virtually every state in the Cotton Belt will attend the meeting to be present at a joint conference called to consider the enactment of warehouse legislation based upon the uniformity of operation. Governor R. G. Pleasant, of Louisiana, will preside as chairman of the Governors' conference.

A committee has been appointed composed of the executive officials of the Warehouse Division of the Federal Bureau of Markets, State Directors of the Bureau of Markets, State Directors of the Extension Service and officials of the American Cotton Association. This committee, which is a large one, will handle the local warehousing problem as regards actual construction and operation.

To consider the best methods of financing the cotton crop in storage while it is being slowly marketed by the growers, there will be a conference of Southern bankers. Members of the committee that will meet for this purpose include executive officials who direct the policies of some of the biggest banking institutions in the Southern states. Nathan Adams, a well known banker of Dallas, Texas, has been designated as chairman of this conference.

It is fast becoming apparent to Southern cotton growers and planters, as well as brokers, that more importance is attached to the protection of the crop than to a means of financing it. More clearly explained this means that the South needs warehouses for the storage of its cotton much more than it needs immediate money.

Enforced liquidation in the past has served to cause great losses on cotton throughout the South. While there has been in the past two years a great increase in the wealth of the South and its financial resources this has not served to eliminate the loss resultant from enforced liquidation. Formerly the losses might well be attributed to lack of

money to finance the crops. Now the losses are directly due to a lack of sufficient warehouses to protect the crops from damage.

Statistics have been advanced by the American Cotton Association which tend to show that where one bale of cotton was forced on the market for lack of money to finance it, one hundred bales were forced on the market through lack of sufficient warehouse facilities to protect it. These figures are based on an estimate by W. W. Morrison, New Orleans, who has traveled extensively over the Cotton Belt and is conversant with the industry in the South.

In a recent article Mr. Morrison set forth other figures which show in money value the actual loss the South has suffered through inadequate warehousing facilities. He said:

"The loss through damage out of the crop grown in 1919 has been estimated at 1,000,000 bales. This at current prices amounts to \$200,000,000. From the amount of cotton exposed and the duration of the exposure the writer believes this estimate to be reasonable. In any event, it is certain that the loss was of such magnitude that no industry could stand it for any length of time and prosper. It is certain, also, that the lack of warehouses and the consequent damage has been the basis for many attacks on the price of cotton. It was reasoned that a very considerable part of the crop would be forced on the market, or the producers would have to stand the loss incident to exposure. These attacks can, therefore, be expected to continue until adequate warehouse facilities are provided for."

One of the principal speakers at the convention of the American Cotton Association in Montgomery, will be Governor W. P. G. Harding, of the Federal Reserve Board, who will deliver an address endorsing the economic aims and purposes of the association.

W. G. Turner, of Memphis, who is the general manager for the largest concentrating plant for storing and compressing cotton in the United States, will deliver an address in which he will tell of the primitive and wasteful practices that are employed by so many cotton merchants in the handling of the cotton crop between the growers and the spinners. This waste is such as to reach into figures almost startling in their magnitude.

Joseph E. Ransdell, United State Senator from Louisiana, will deliver an address on "The Economics of High Density Gin Compression." Hoke Smith, United States Senator from Georgia, is also on the program for an address on a subject of kindred interest.

Other prominent speakers are on the program, some of whom will discuss warehousing and warehousing facilities, these speakers including presidents of various agriculture colleges in the South, state superintendents of education of the cotton states, and other men prominent in the industry in the South.

The Prodigal Railroads have returned, and the shipper may as well prepare to play the rôle of the fatted goat.—*Exch.*

CARTAGE INTERESTS PLAN ASSOCIATION

Detroit Transportation Body Is Behind Movement to Form a National Organization

DETROIT, March 6.—The Detroit Transportation Association has placed at the disposal of its secretary, F. L. Henk, a fund to finance efforts in organizing a national business association of cartage interests. It is expected a convention will be called in Detroit within a few months. The California State Draymen's Association, the Pacific Coast Draymen's Association and the Cleveland Transportation Association are among the organizations which have expressed interest in the proposal. Regarding the plans, Mr. Henk said today:

"It is peculiar of the handling industry in the United States that thousands of small units go to make it up. It is this feature of the business that causes a great many outsiders, even men engaged in the business, to underestimate the vast amount of capital invested in this form of enterprise. A conservative estimate would be one billion dollars, and this amount is rapidly being enlarged as the motor truck gains precedence over the horse-drawn vehicle. This vast amount of capital, if it is to pay fair dividends, must be surrounded by safeguards which will protect it from forces inimical to its existence."

These "inimical forces," Mr. Henk declared, were: First, operators who perform handling services "for rates which are below the actual cost of operation and upkeep of their equipment"; second, the "unreliable truck dealer," who sells a truck on a down-payment of a few hundred dollars and permits the purchaser to sign "a long string of notes," and who "bait" the prospective hauler with promise of work, usually offering "contracts"; third, "the ambitious politician" who likes to enact "class legislation" unfavorable to motor trucks and better highways; and, fourth, railroad lobbyists. Mr. Henk continued:

"Due to topographical and road conditions, the highway transport has progressed more rapidly in some sections than in others. Where it has made progress, it has done so only after overcoming many obstacles. A medium of interchange of knowledge gained by experience would therefore do more toward the development of the highway transport than any one thing. Then, too, evils peculiar to the hauling industry which exist in California to-day may develop in New York or Tennessee tomorrow, and vice versa. Therefore, a national medium of interchange of experience would prove invaluable. These are only some of the conditions which exist to-day and which, if they were made known to the entire country and remedial steps taken by a properly organized body of hauling interests, could be greatly improved, and many a dollar invested in the hauling business would be made to pay a real profit instead of only a paper one.

WAREHOUSING NEWS

Contributions Solicited

NEW BUILDINGS, ETC.

Hartford Dispatch & Trucking Co., Hartford, Conn., has entered the warehouse business and plans to erect soon a fireproof building with railroad trackage.

Merchants' Transfer & Storage Co., Davenport, Iowa, has purchased a plot 150 x 120 ft. and will erect a large concrete and steel warehouse, five stories high, with side track connections.

Huntington Transfer & Storage Co., Huntington, W. Va., is planning construction of a new fireproof warehouse to contain about 72,000 sq. ft. of floor space, to take the place of its building recently damaged by fire.

Twin City Warehouse Co., St. Paul, has transferred its business to the fireproof warehouse of the Fidelity Storage & Warehouse Co.

Terminal Warehouse Co., Baltimore, plans construction of a warehouse, 600 x 120 ft., six stories high, of reinforced concrete with brick face, on Boston Street.

Ninth Street Terminal Warehouse Co., Cleveland, has enlarged its cold storage facilities from 500,000 to 1,250,000 cu. ft. A further extension of 600,000 cu. ft. is under consideration.

North Shore Fireproof Storage Co., Chicago, is remodeling the Morse Avenue Theatre building for use as a fireproof storage house.

Rick Warehouse & Storage Co., Inc., Wilmington, Del., is planning to operate warehouses with a capitalization of \$1,000,000.

Edwards Storage Warehouse, New York City, has been sold by William C. Edwards, a pioneer in the industry. The name of the purchaser has not been disclosed.

Boston Wool & Market Co. has purchased from the Division of Waterways and Public Lands two lots in south Boston with combined frontage of about 1000 ft., with a depth of 80 ft. to spur track of New Haven Railroad and plans to erect an eight-story fireproof warehouse involving an investment of more than \$3,000,000.

Savannah Warehouse Corporation, Savannah, has filed a petition with the railroad commission for authority to issue accumulative 8 per cent preferred stock to be used for construction purposes.

Taft Transfer Co., Hood River, Ore., will erect a large warehouse, with trackage of tile construction to be 50 x 120 ft.

St. Paul Terminal Warehouse, St. Paul, expects to open its \$400,000 addition to its warehouse on April 1. As completed the entire building is six stories high and contains 400,000 sq. ft. of

floor space. It has trackage and is one of the most modern warehouses in the country. A number of firms are making use of the building for storage, assembling and other purposes. The R. M. Hollingshead Co., automobile supplies, has opened its northwest headquarters in this warehouse and the Minnesota State Prison has rented space and will in the future distribute all of its prison farm machinery through this plant.

Galveston Cotton Compress & Warehouse Co., Galveston, has completed plans for erection of addition to its present plant. As completed, there will be sufficient storage room for more than 125,000 bales of cotton and this will be one of the largest cotton warehouses in the United States.

Henry Tompkins, Bernardino, Cal., announces plans for erection of a modern brick fireproof warehouse, the space to be leased to manufacturers.

W. B. Wiggins, Portland, Ore., has filed plans for the erection of a \$35,000 two-story warehouse on a plot of ground, 100 x 150 ft.

Maier Sales & Storage Co., Huntington, W. Va., will erect a \$40,000 storage house, to be used for distribution of the products of manufacturers. The structure will have a capacity of approximately 100 carloads. W. J. Maier is president and C. L. Hibbner is secretary-treasurer. The company is capitalized at \$100,000.

Great Northern Warehouses, Inc., New York City, is constructing a new storage warehouse, fireproof, seven stories, adjacent to New York Central yards. Building will be equipped with rooms for storage of pianos, rugs, household valuables, trunks, silverware, etc.

Santa Ana Walnut Growers' Association, Santa Ana, Cal., plans erection of new warehouse, 80 x 90 ft., with Santa Fe trackage, adjoining the Walnut Packing House. The structure will cost about \$17,000.

Arizona American-Egyptian Cotton Growers' Association plans to finance and erect a bonded warehouse and compress at Phoenix.

Big Lakes Wool and Mohair Association, San Angelo, Tex., has begun construction of a large wool warehouse at Big Lake. Structure will be 60 x 120 ft., with concrete floors, and will be thoroughly modern. Building is expected to be completed by April 15.

INCORPORATIONS

Gawthorp Storage Warehouse has been incorporated at Wilmington, Del., to do general storage business; capitalization \$100,000.

Lumberman's Warehouse & Storage

Co., Portland, Ore., has been incorporated with \$100,000 capital.

Dayton Transfer Co., Dayton, Ohio, has been incorporated with capital stock of \$25,000, with C. E. Gaskell as president and J. Q. Finfrock as secretary.

Star Express & Long Distance Moving Co., Trenton, N. J., has been incorporated to do a general carting business in and out of New Jersey and to store goods, wares and merchandise. Incorporators are Sander Zelenak, Frank Coffcardy, Michael Fedorke and Fred J. Wittenborn.

Mutual Warehouse & Compress Co., Savannah, has filed a petition in the Superior Court asking for incorporation under the Georgia laws. The company has a capitalization of \$500,000, and plans to construct warehouses and operate a cotton compress. The further right is asked to own, operate and charter tugboats, vessels, barges and boats, and to build an electric light and power plant and waterway, and to operate these and to construct and control docks and wharfs, and to buy real estate necessary for operating a warehousing and compress business. The incorporators are M. N. Stewart, John W. Gleason, Eugene Harmon and M. N. Stewart, Jr.

Macfarland Transfer, Storage & Distributing Co., New York City, has been incorporated with a capitalization of \$300,000. The incorporators are Walter Macfarland, B. M. Macfarland, and Chas. J. Walsh.

Cotton Warehouse Expansion

ATLANTA, GA., March 12—The Cotton Warehouse Co., an Atlanta concern, has purchased a six-acre tract of land on the outskirts of the city and will erect this spring and summer a storage warehouse to cover the entire tract. The cost of the project was not announced, but it will run well into hundreds of thousands of dollars. The company already owns one plant here covering three acres of land, and the two plants together will make what is believed to be the largest storage warehouse in the South. The company plans to construct also a big compress if the necessary machinery can be secured.

The new warehouse will be erected directly across the Southern Railway tracks from the company's present plant and the two buildings will be connected by an underground viaduct or overhead passageway, this combining them and giving a capacity sufficient for the storage of about 40,000 bales of cotton.

The officers of the Cotton Warehouse Co. are J. R. Ellis, Jr., president; T. F. Ellis, secretary and treasurer; and J. H. Kennett, sales manager.

Stewart

MOTOR TRUCKS

CHASSIS PRICES

$\frac{3}{4}$ -Ton.....	\$1350
1 -Ton.....	\$1750
$1\frac{1}{2}$ -Ton.....	\$2250
2 -Ton.....	\$2875
$3\frac{1}{2}$ -Ton.....	\$3895
f. o. b. Buffalo	



In the service of the Carting Business

Ask your Stewart dealer, or send to the Stewart factory at Buffalo for some of the fine economy records made by Stewarts for the carting business.

Stewart simplified construction produces a high-grade truck at low first cost—a perfectly balanced truck in the relation of weight to capacity to economy of operation.

The $\frac{3}{4}$ ton and 2000 lb. delivery Stewarts have all the speed, comfort and convenience of the frailer half-breed passenger-car truck and none of its light construction.

The $1\frac{1}{2}$ ton, $2\frac{1}{2}$ ton and $3\frac{1}{2}$ ton models have overload capacity and reserve power, plus an exceedingly low running cost, and as seven-year-old Stewarts are still doing daily service; their life has not yet been determined.

Stewarts are making money for owners in big American cities, on hundreds of farms and in 38 foreign countries. Hundreds of firms that first bought one now own fleets.

Service Transfer Co.'s Experience:

We have three Stewart trucks. The first was a $3\frac{1}{2}$ ton truck and we were so well pleased with its performance that five months later we purchased the 2 ton truck that we use in the Russell-Newman service. Thursday of this week we purchased a 1 ton Stewart.

The gasoline consumption is unusually low. The $3\frac{1}{2}$ ton averages 7 miles to the gallon, the 2 ton 8 miles and the 1 ton we haven't had long enough to tell what it does use. The oil averages accordingly.

(Signed) SERVICE TRANSFER CO.,
By Edwin Thenn, Pres.
Twin Cities.

Stewart Motor Corporation, Buffalo

Quality Trucks Since 1912

"Horse Sense"



Study the Traffic's specifications, and consider the price, then you'll have the reason why the Traffic is giving satisfaction and making money for owners and dealers.



The sun never sets on the Traffic—they are in operation in all corners of the earth.



On a sheep ranch in New Mexico, water is so scarce where the animals graze that the owners haul it to the sheep in a motor truck. We wonder if it will ever be possible to save crops during a drought by sprinkling a farm with water from an airplane? For instance, how much for a rain to cover 40 acres?



The Traffic is the lowest priced 4,000-lb. capacity truck in the world. Built of standardized units.



Traffic Specifications

Red Seal Continental 3 3/4 x 5 motor; Covert transmission; multiple disc clutch; Bosch magneto; Carter carburetor; 4-piece, cast shell, cellular type radiator; drop forged front axle with Timken roller bearings; Russel rear axle, internal gear, roller bearings; semi-elliptic front and rear springs; 6-inch U-channel frame; Standard Fisk tires, 34 x 3 1/2 front, 34 x 5 rear; 133-inch wheelbase; 122-inch length of frame behind driver's seat; oil cup lubricating system; chassis painted, striped and varnished; driver's lazy-back seat and cushion regular equipment. Pneumatic cord tire equipment at extra cost.

Chassis \$1495 factory



Notice to Dealers

It is Traffic policy to make direct connections in every city, town and village throughout the United States. Wire for territory you want and if open come to the factory and see the Traffic produced and perform.



The Traffic is produced by the largest exclusive builders of 4,000-lb. capacity trucks in the world.



Traffic Truck

4,000 LBS. CAPACITY

CHASSIS

\$1495

FACTORY

Making Good in Hard Service

Read This Letter

St. Louis, Mo., June 18th, 1919.

Traffic Motor Truck Corporation,
5200 North Second Street, St. Louis, Mo.

Gentlemen:

Please have your representative call and see me at once in regard to increasing our fleet of TRAFFIC TRUCKS.

We are more than pleased with our present TRAFFIC TRUCK equipment and have decided to replace all our old truck equipment with TRAFFICS.

For your information, wish to advise that our TRAFFIC TRUCKS, some of which are almost two years old, are running 24 hours a day every day in the year and are averaging a little better than 12 miles to a gallon of gasoline, have a wonderful amount of power and are giving very satisfactory service.

Very truly yours,

POPULAR PRICE EXPRESS CO.,

(Signed) Chas. E. Jones, President and Manager.

The Popular Price Express Co. is one of the largest and most successful independent express companies in St. Louis operating a large fleet of Motor trucks for general transfer and express work



Traffic Motor Truck Corporation

St. Louis, U. S. A.

Largest Exclusive Builders of 4000 Lb. Capacity Trucks
in the World.




REID BROS. EXPRESS CO.
GENERAL HAULING
 DISTRIBUTORS AND FORWARDERS

SERVICE
 OUR MOTTO
 I I I I I

CASNEY 3828
 CASNEY 4871
 DELMAR 3814

OFFICE AND WAREHOUSE BERTHA AVE. AND SUBURBAN TRACKS
St. Louis August 22nd, 1919

United States Tire Co.
 3149 Locust Street,
 City.

Gentlemen:—Enclosed are a few facts which may be of interest to you. We have used United States tires on our fleet of Republic trucks doing service for J.C. Merrell Drug Co. of this city and are more than pleased with their performance. These tires cover 75 Miles daily, and are subjected to rough usage, one set in particular has gone 15000 miles and still looks good. We like your tires so well that we are beginning to use them on our 3 1/2 and 5 ton trucks.

Yours truly,
 REID BROS. EXPRESS CO.
A. D. Reid

ORDINARY truck tires will do ordinary work.

It takes the unusual tire to do the unusual thing.

Reid Brothers Express Company are but one of the many users who have proved by test that **UNITED STATES SOLID TRUCK TIRES** stand absolutely alone in point of consistent, hard service, efficiency.

United States Tires are Good Tires

Similar to the grain in wood—the grain in rubber is largely responsible for splitting and cracking in solid truck tires. Explain to your trade that the new grainless rubber solid truck tires made by United States Rubber Company offer far greater mileage and more repeat orders.



An Erroneous Conclusion Correctly Concluded

"In view of the excessive cost of building material, etc., it is out of the question to consider any new improvements."

Are you warehousemen, who believe this statement, ready to be shown that **IT IS NOT TRUE?** If so, digest the following facts relative to the building and operation of a modern fireproof warehouse today as compared with six years ago.

The cost now is admittedly twice as great; but the revenues that are being obtained by the warehouseman, who has up-to-date facilities, provides maximum protection and gives first class service, are at least double what they were six years ago. This is a paramount fact that investigation substantiates.

In this connection, too, it must not be overlooked that present costs of construction are not going to be appreciably lower for a considerable length of time. Meanwhile the progressive warehouseman whose business requires more space, will, if he builds, receive additional income that will more than offset the extra cost of construction; and, furthermore, he will have successfully blocked the competitor who awaits lower prices before building.

Also squint at the thing from another angle—that of comparative returns from an old warehouse and a new one. A modern warehouse designed by us has from 20% to 30% greater net available storage space than a house built five years ago.

Just one more word. We address these statements to WAREHOUSEMEN—not to "Cheap John" storers who are always underbidding each other, and claim that reasonably remunerative rates, such as those established by the different associations, cannot be obtained.

Now shoot back a broadside of disapproval, if you are not fully convinced.

We are ready to prove these statements, not merely in a general way but by specific application to your particular situation. It will cost you only a bit of stationery, a stamp and a few minutes time to discover whether we are deceivers or you are misinformed.

It's up to you to put it up to us.

Moores & Dunford Engineering Corporation

WAREHOUSE ENGINEERS

744-6 First National Bank Bldg.

CHICAGO, ILL.

Shippers' Index

A Guide to representative Merchandise, Cold Storage and Household Goods Warehouses, Forwarders and Terminal and Transfer Companies, arranged by States and Towns

A MESSAGE TO WAREHOUSEMEN THAT DISTRIBUTION MANAGERS WILL WANT TO READ

THE warehousing industry is growing. It has got to grow to meet the increasing demands of manufacturers who are on the hunt for distribution facilities which are equivalent to the highest type of service. We read constantly in the trade journals devoted to the interests of producers that in such-and-such a city the warehouses are filled to overflowing. One of the leading manufacturers—a company which uses public warehouses and prefers them rather than to establish its own—recently found it impossible to lease space in commercial storage plants in two Southern cities. What was the result? The company was forced to make other arrangements.

It is a fact that one of the two Southern cities possesses some of the largest and most modern storage plants in the United States. The owners of those warehouses would have been glad to obtain the business of the manufacturing company mentioned.

There is one good reason why the owners did not get that business. They did not advertise their service and facilities where the traffic manager of the manufacturing company would *know*. That traffic manager is a subscriber and a reader of *Distribution & Warehousing*—and he is one of many of his profession.

Now you know what the Shippers' Index is for. Are *your* service and facilities described there? It is *the* medium in which to tell *your* advertising story to the manufacturers!

COMING EVENTS

Meetings Scheduled by Associations in the Industry

Canadian Warehousemen's Association	Winnipeg	April 15
Southern Furniture Warehousemen's Association	Memphis	(Date not fixed)
Northwest Transfer & Warehousemen's Association	Seattle	May
Central Warehousemen's Club	(To be decided)	June
National Team & Motor Truck Owners' Association	Chicago	June 28
National Furniture Warehousemen's Association	(To be decided)	July
Texas Warehouse & Storagemen's Association	Waco	August
American Warehousemen's Association	(To be decided)	December
American Chain of Warehouses	(To be decided)	December
Pacific Coast Furniture Warehousemen's Association	San Diego	February, 1921
Montana Transfer & Storage Men's Association	Great Falls	February, 1921
California State Draymen's Association	Fresno	March 13, 1921
New York State Cold Storage Association	(To be decided)	June, 1921

BIRMINGHAM, ALA.**HARRIS TRANSFER
AND WAREHOUSE COMPANY**

(Equipped to Handle Anything)

MODERN FIREPROOF WAREHOUSE

Special Attention Given to Packing and Shipping

When shipping to Birmingham, consign goods to Harris
—he will look after your interests, also those
of your customer

Offices: CHAMBER OF COMMERCE BLDG.

BIRMINGHAM, ALA.**Wittichen Coal & Transfer Co.**

12 South 20th Street

Transfer and storage of household goods. Packing and
shipping. Forwarding and distributing agents. Heavy
Haulage, Motor Service.

BUILDING MATERIAL DEALERS

LITTLE ROCK, ARK.**WAREHOUSING
AND FORWARDING**Distributors of Pool Cars, Parcel Post Catalogs and
Merchandise**TERMINAL
WAREHOUSE COMPANY**

109-111 RECTOR AVENUE

All track connection

BERKELEY, CAL.**STUDENTS
EXPRESS & TRANSFER CO.**MOVING
STORING
FORWARDING

2132 SHATTUCK AVENUE

LOS ANGELES, CAL.**Fidelity Fireproof Storage**

1836 Arapahoe Street, Los Angeles, Cal.

Intelligent and forceful supervision of all
business intrusted to us.We have a seven-story reinforced concrete
warehouse.We consolidate and solicit distribution of con-
solidated cars of household goods.

Frank Robert Palmateer, Prop.

LOS ANGELES, CAL.**Shattuck & Nimmo
WAREHOUSE CO.****Storage and Distribution
Of All Non-Perishable Commodities**All cars handled at our own plant. No switch-
ing charge if cars are consigned in our care.Manufacturers and forwarders consolidating
car loads for Pacific Coast distribution are
assured of efficient service and prompt returns.**MEMBERS**Pacific Coast Furniture Warehousemen's Association, American
Chain of Warehouses, National Distributing Division,
Local Rotary Club and Chamber of Commerce**SAN FRANCISCO, CAL.****BEST IN THE WEST****OUR SAN FRANCISCO WAREHOUSE**When you Ship to California
Remember to Ship to**BEKINS FIREPROOF STORAGE**Prompt and Intelligent Returns,
Your Customers SatisfiedLos Angeles
1341 Figueroa St.Oakland
22d & San PabloSan Francisco
13th and Mission St.



LOS ANGELES, CAL

Putting Pacific Coast Sales in the Palm of Your Hand

The salesman who can market more of your products over a bigger territory than any other one man is a jewel you are after, isn't he. Aren't you open to consider, then, the proffered aid of the biggest salesman on the Pacific Coast?

One of the greatest merchandising organizations the world has ever known, the Union Terminal Warehouse Company, Los Angeles, is offering you the services of a sales force and a warehousing system that can put your product into every channel of sale and move it faster than any other form of merchandising.

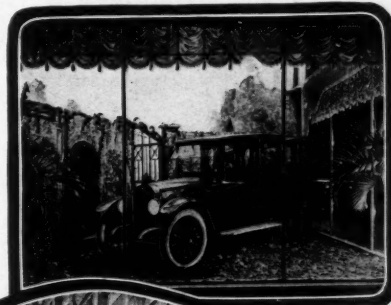
In face of this business-getting machine, a factory branch of your own is merely a toy. The possibilities Union Terminal service holds for you are unlimited. If you need a display room to add "special atmosphere" to your product, you'll find the Union Terminal plan a sales-getter.

The Union Terminal warehouses, docks, trackage, freight storing and moving facilities are the largest and best anywhere west of Chicago. But the great factor to interest you vitally is the new connecting link that brings the Union Terminal right square up to you, its sales department.

A big staff of sales specialists, schooled in the potentialities of the Pacific Coast region, works to bring you, the manufacturer, into contact with the largest number of buyers at the least possible expense. Your product meets all the jobbers, distributors and dealers—not just one or two—in minimum time.

If there's any special service a patron desires, we'll furnish that, too. Let us tell you more about Union Terminal advantages for you. Write now.

*Special showroom
sells goods*



*Ample switching
facilities make
speed*



Union Terminal Warehouse Company
Seventh & Central Avenue, Los Angeles, Calif.

Other aids we offer you:

- We store your merchandise.
- We insure it at the lowest rate in the West.
- We look after your shipments.
- We collect your drafts and accounts.
- We distribute your samples.
- We make you reliable credit reports.
- We trace your cars and save you demurrage.
- We furnish offices for your representative's use.
- We loan you money on your warehouse receipts.
- We furnish you a special display room, if desired.
- We furnish you factory space and market your output.

This new building adds 500,000 fire-proofed, dust-proofed square feet to the largest warehouse system west of Chicago.



Union Terminal Warehouse Co.

SACRAMENTO, CAL.

NO TASK TOO GREAT
LAWRENCE
 WAREHOUSE COMPANY
 NO DETAIL TOO SMALL



OAKLAND, CAL.

NO TASK TOO GREAT
LAWRENCE
 WAREHOUSE COMPANY
 NO DETAIL TOO SMALL



SAN FRANCISCO, CAL.

HASLETT WAREHOUSE CO., THE

228 Pine Street, San Francisco

Will handle your interests in the Far West with excellence of service that has grown from years of experience in California territory.

Some Haslett Helps For You

We will store or forward your merchandise.
 We offer also U. S. Customs and Tea Bonded Storage.
 Yard storage provided. Public Weighers.
 Warehouse receipts issued—collections made.
 Pool car distributing and reforwarding a specialty.
 Drier, cleaner and fumigator for beans, corn and other grains.
 Light hauling, city deliveries and general truck service.
 Handy location to retail districts and to freight stations.
 Low insurance rates.
 Every form of time-saving equipment.
 Any special service a client desires will be given personal and immediate attention.
 Coffee hulling, conditioning and hand picking.
 Track connections with all lines.

S. M. Haslett, President P. E. Haslett, Secretary

SAN FRANCISCO, CAL.

NO TASK TOO GREAT
LAWRENCE
 WAREHOUSE COMPANY
 NO DETAIL TOO SMALL



If Your City Isn't Represented Here

Put it on the shippers' map by
 inserting your card in this space.

DENVER, COLO.

THE WEICKER TRANSFER & STORAGE COMPANY

Office, 1017 Seventeenth Street

New Fireproof Warehouse on Track

Storage of Merchandise and Household Goods

Distribution of Car Lots a Specialty

Every Facility for Handling Safes, Boilers and Heavy Machinery. Complete Fleet of Motor Trucks and Modern Equipment

Members

American Warehousemen's Association
 Illinois Furniture Warehousemen's Association
 New York Furniture Warehousemen's Association
 Pacific Coast Furniture Warehousemen's Association
 Central Warehousemen's Club
 American Chain of Warehouses
 Southern Furniture Warehousemen's Association

HARTFORD, CONN.

Tel. Connection Office: 335 Trumbull St.

Safety Vaults for Silverware

GEORGE E. DEWEY & CO.

JOSEPH M. FELCHAT Proprietor

Local and Long Distance

FURNITURE AND PIANO MOVING

Packing, Crating and Shipping of
 PIANOS, FURNITURES, CHINA

Only Fireproof Storage Warehouse in Hartford

HARTFORD, CONN.

The Roger-Sherman Transfer Co.

Freight Forwarding—Moving

TEAMS
 AUTO-TRUCKS

GENERAL TRUCKING
 HEAVY RIGGING

1056 MAIN ST.

NEW LONDON, CONN.

B. B. Gardner Storage Co., Inc.

18 BLACKHALL STREET

PIANO AND FURNITURE PACKER, MOVER
 AND SHIPPER

Safe Mover—Freight and Baggage Transfer—STORAGE

WATERBURY, CONN.

The Ralph N. Blakeslee Co.

TRANSFER AND STORAGE

Special Facilities for Moving Heavy Machinery and Safes

Storage Warehouse for Merchandise

Separate Apartments for Furniture

WASHINGTON, D. C.

Moving
 Shipping
 Storing



Smith Transfer & Storage Co.

Office: 912 S Street, N. W.

Let Us Handle Your Washington Business

WE WILL PLEASE YOU

WASHINGTON, D. C.

UNITED STATES STORAGE CO.

418-420 TENTH STREET, N. W.

MEMBERS:
N. Y. Furniture Warehousemen's Association
Illinois Furniture Warehousemen's Association
Southern Furniture Warehousemen's Association



PROMPT REMITTANCES
Efficient and Courteous Service
MOTOR TRUCKS
and
PADDED VANS
Modern Fireproof Warehouse

BOISE, IDAHO

PEASLEY

TRANSFER & STORAGE COMPANY

STORAGE, TRANSFER AND FORWARDING

NINTH AND GROVE STREETS

CHICAGO, ILL.

BEKINS

HOUSEHOLD SHIPPING COMPANY

Reduced Rates on Household Goods, Automobiles and Machinery

General Offices, 805 BEDFORD BLDG., Chicago
NEW YORK, BOSTON, BUFFALO, CINCINNATI

JACKSONVILLE, FLA.

UNION TERMINAL WAREHOUSE COMPANY

EAST UNION and IONIA STREETS

55 Rental Compartments Track Capacity 52 Cars

Building of reinforced concrete with sprinkler system.
Low Insurance Rate. Sub-Post Office and branch
Western Union Telegraph. Joint Railroad Agent.
L.C.L. freight loaded direct for line of road.

GENERAL MERCHANDISE STORAGE
AND FORWARDING

Special attention to handling of pool cars.

CHICAGO, ILL.

EMPIRE Storage Company

Convenient to All Railroad Switches.

Modern FIREPROOF
Warehouses for Storage of
Household Goods



MOVING
PACKING
SHIPPING

Heated Piano Rooms
Art Galleries
Vaults for Valuables
Private Compartments
for Furniture
Automobiles Stored
Motor Truck Service



Established 1891
Capacity 1,500,000 cu. ft.
Low Insurance Rate.

General Office
52nd St. and
Cottage Grove Ave.
Chicago

MEMBERS:
Illinois Furniture Warehousemen's Association
New York Furniture Warehousemen's Association

JACKSONVILLE, FLA.

Wiesenfeld Warehouse Company

P. O. Box 1133

General Merchandise Storage and Distributing
References:

Any bank, jobber or transportation man in the city

ATLANTA, GA.

CATHCART

TRANSFER & STORAGE COMPANY

Moves, Stores, Packs, Ships
Household Goods Exclusively

Office and Warehouse, 6-8 MADISON AVE.

ATLANTA, GA.

Warehousemen

MORROW

TRANSFER & STORAGE COMPANY

COMMERCIAL STORAGE

Distributors—R. R. Trackage—Carloads a Specialty
Household Goods Moved, Stored, Packed and Shipped
180-184 MARIETTA STREET

ATLANTA, GA.

Warehousemen

Distributors

Southern Sales & Storage Co.

Markets secured for Meritorious Mdse.
Concrete Warehouse, R. R. Trackage,
Make our office your Southern Headquarters,
We have an efficient Sales Force.
13 Produce Place

Pick Your Consignee

from the companies listed in this section—they are the "live wires" of the field and will handle your shipments promptly and efficiently.

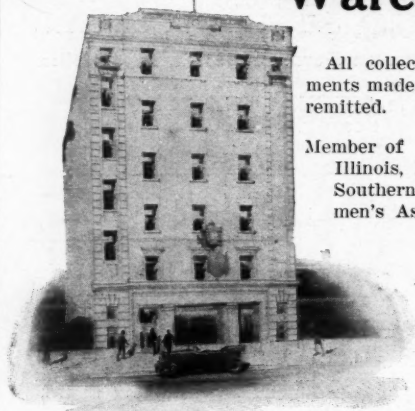
It is also worth your while to earn their reciprocity.

CHICAGO, ILL.

ESTABLISHED 1874

HEBARD

Storage Warehouses



All collections on shipments made to us promptly remitted.

Member of
Illinois, New York and
Southern Warehouse-
men's Associations.

Our Seventh Warehouse

on 6331-33 Broadway, near Devon Avenue, which will handle all Rogers Park or North Shore shipments.

Warehouses A-B-C-D, West Side, Ogden and Winchester Aves.
Warehouses E-F, North Side, Sheridan Road and Sheffield Ave.
Warehouse G, North Side, Broadway near Devon Ave.

FORT WAYNE, IND.

BROWN TRUCKING COMPANY

MOVING, DISTRIBUTING, STORAGE AND
GENERAL TRANSFER—MOTOR SERVICE

Pool Cars a Specialty

Office, 125 W. Columbia Street

FORT WAYNE, IND.

Private Siding With All Railroads

Pettit's Storage Warehouse

FIRE PROOF BUILDING

ROOMS FOR HOUSEHOLD FURNITURE

General Merchandise Warehousing and Transferring
Factory Distributors

Pick Your Consignee

from the companies listed in this section—they are the "live wires" of the field and will handle your shipments promptly and efficiently.

INDIANAPOLIS, IND.



Our Service Consists of

Warehouse for Manufactured Articles.

Prompt shipment for all orders.

Prompt reports of shipments as you want them.

Trucks for Drayage Equipment.

We are, in fact, ready to be your Shipping Department.

Located in the heart of the U. S. A., within 12 to 24 hours of your customers in Indiana, Ohio, Illinois, Kentucky and Michigan.

Insurance rate, 30c—extra hazardous goods not taken.

Six-story and basement, heavy mill construction, sprinkler equipped, A. D. T. Watchman Service. 150,000 square feet heated to 50°.

We solicit your business and refer you to any of our customers as to our ability to do it right.

Railroads:

Penna. Ry.; C. C. C. & St. L. Ry.; C. I. & W. Ry.; L. E. & W. Ry.; Ills. Central Ry.; C. I. & L. Ry.
18 Traction Freight Lines.

The Indianapolis Warehouse Co., Inc.

FRANK A. TODD, V. P. and Gen'l Mgr.

West New York and Canal

INDIANAPOLIS

INDIANA

INDIANAPOLIS, IND.

We Have the Very Best of Equipment for Handling
Heavy Machinery, Boilers, Engines, Tanks
Vaults and Safes for Erecting Smoke Stacks



INVESTMENT \$200,000.00

We have just completed one of the most modern fire-proof warehouses in the country—centrally located on a privately owned railroad switch accommodating eight cars.

We are equipped to give the very best service in all kinds of moving and packing. All shipments consigned to our care will receive prompt attention and our twenty-five years' experience and reliability insures this service.

HOGAN TRANSFER & STORAGE CO.

Member
N. F. W. A. and I. F. W. A.

Established
1892

SOUTH BEND, IND.

Warner Warehouse Company

Merchandise Storage and Distribution
Branch House Service for Manufacturers

SOUTH BEND is a natural distributing center for Michigan, Indiana and Ohio. Our warehouse is located on New York Central tracks and we have free switching connections with all lines entering the city.

518-524 South Pine St.
SOUTH BEND, INDIANA

H. A. PRUYNE, Manager

Members: { American Warehousemen's Association
Central Warehousemen's Club
American Chain of Warehouses

LOUISVILLE, KY.

SAFETY
TRANSFER & STORAGE CO., INC.
Offices 105 S. Hancock St.

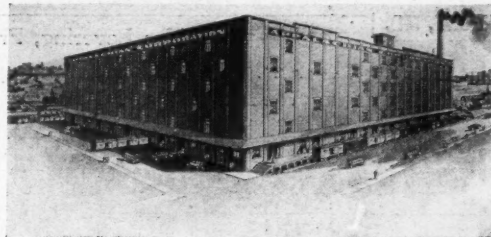
HOUSEHOLD GOODS

Moved, Packed, Stored, Forwarded
AUTOMOBILE AND TRACTOR STORAGE
Members I. F. W. A.

If Your City Isn't
Represented Here

Put it on the shippers' map by
inserting your card in this space.

NEW ORLEANS, LA.

**APPALACHIAN
SERVICE**

SPACE—STORAGE—DISTRIBUTION
and FORWARDING

To the WORLD'S COMMERCE

Through the

PORT OF NEW ORLEANS, U. S. A.

STORAGE We own the Largest Modern Public and Government Bonded Warehouse in the South. Contains 7,500,000 cubic feet, equal to more than 14 acres of surface storage facilities, caring for 3,000 carloads of material at one time. Our sidings have a capacity of 24 cars. Direct connection with all railroad and steamship lines entering New Orleans.

DISTRIBUTION Our facilities for giving our clients a Perfect Distribution Service are unequalled by any warehouse in the Southern States.

FORWARDING We maintain a well organized Freight Forwarding Department for both Import and Export business. We secure lowest freight rates, attend to validation of bills of lading, take out consular invoices, render customs service and deliver merchandise in proper time and condition to steamer or railroad.

FOR **SERVICE ADDRESS**

APPALACHIAN CORPORATION

INC. OF LOUISIANA

LOUIS B. MAGID, President

South Peters, Thalia, South Front and Erato Streets

NEW ORLEANS, U. S. A.

"The City of New Opportunities"

SPECIAL

Our Negotiable Receipts are Current in all financial centers. When desired we assist. We also arrange Marine Insurance and Advances on Carload Shipments.

BALTIMORE, MD.

Phone Gilmer 3000.

THOS. H. VICKERY, President.

**BALTIMORE STORAGE
& MOVING COMPANY**

1710 to 1720 Edmondson Ave.

Members { N. Y. F. W. A.
Balt. F. W. A.

Fireproof W'h's'e in rear

BALTIMORE, MD.

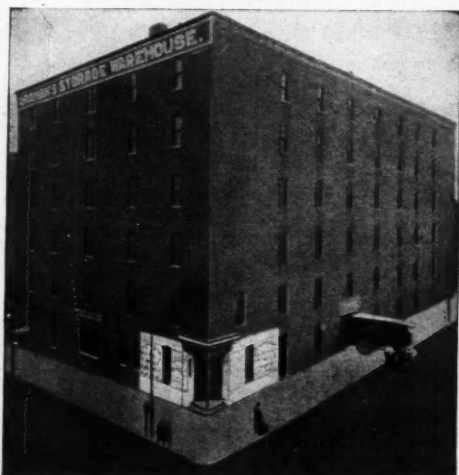
Leonidas Levering, Pres.

CENTRAL WAREHOUSE CO.
STORAGE—TRANSFER—SHIPPING

517-525 W. Baltimore St.

"DISTRIBUTING AGENTS"Consign Your Pool-Cars Direct to Us. We Handle
Everything**"EXPERT SERVICE"****"LOW FIRE INSURANCE"****BALTIMORE, MD.****Graham's Storage Warehouse***The Largest in Baltimore*

Established 1887 GEO. D. MAGRUDER, Pres. and Gen'l Manager

800 Storage rooms, one to ten Van load capacity.
Vans load and unload in the centre of the building.**MOVING — PACKING — SHIPPING**
MOTOR EQUIPMENT

Send us your Baltimore Consignment

Members, N. Y. F. W. A. — I. F. W. A. — Baltimore, F. W. A.

**If Your City Isn't
Represented Here**Put it on the shippers' map by
inserting your card in this space.**BALTIMORE, MD.****THE KAUFMAN**
Fire-proof Storage Warehouses**BALTIMORE, MD**Send your Baltimore shipments to
MONUMENTAL STORAGE COMPANY**BALTIMORE, MD.**

Fred I. Savage

George P. Savage

THE SAVAGE TRANSFER CO.
TRANSFER AND LIVERYWe Haul Anything, Anywhere, Any Time, by Motor or Horse-
Drawn VehiclesC. & P. PHONES: SOUTH { 321
16871202-4-6-8-10-12-14 Race Street, BALTIMORE, MD.
Storage Warehouse: 529 W. Lee St. Garage: 118-120 W. West St.
THEATRICAL HAULING A SPECIALTY**BALTIMORE, MD.****Security Storage & Trust Company**

15 W. North Avenue

FIREPROOF WAREHOUSES**MOTOR EQUIPMENT****EFFICIENT SERVICE
TO WAREHOUSEMEN**

Members of

Baltimore Furniture Warehousemen's Associations
New York and Illinois Warehousemen's Associations**BOSTON, MASS.**

Established 1880

T. G. BUCKLEY CO.**MOVERS OF HOUSEHOLD GOODS AND PIANOS**
MOTOR TRUCK SERVICE**REINFORCED CONCRETE WAREHOUSE****OFFICE and WAREHOUSE, 690 DUDLEY STREET**

Members N. Y. F. W. A.

BOSTON, MASS.

Quincy Market Cold Storage and Warehouse Co. **STORAGE FOR FREE AND BONDED MERCHANDISE**



Charles River Stores, 480,000 sq. ft. Fireproof construction—Lowest Insurance Rates. Direct track connection with the Boston & Maine R. R. Deep Water Connection—Dock 500 ft. long.

Albany Terminal Stores, 143,000 sq. ft. Fireproof construction—Lowest Insurance Rates. Direct track connection with the Boston & Albany R. R.

Constitution Stores, 60,000 sq. ft. Battery Wharf, 88,000 sq. ft. Wharfage and Storage. Connects with all railroads via Union Freight R. R.

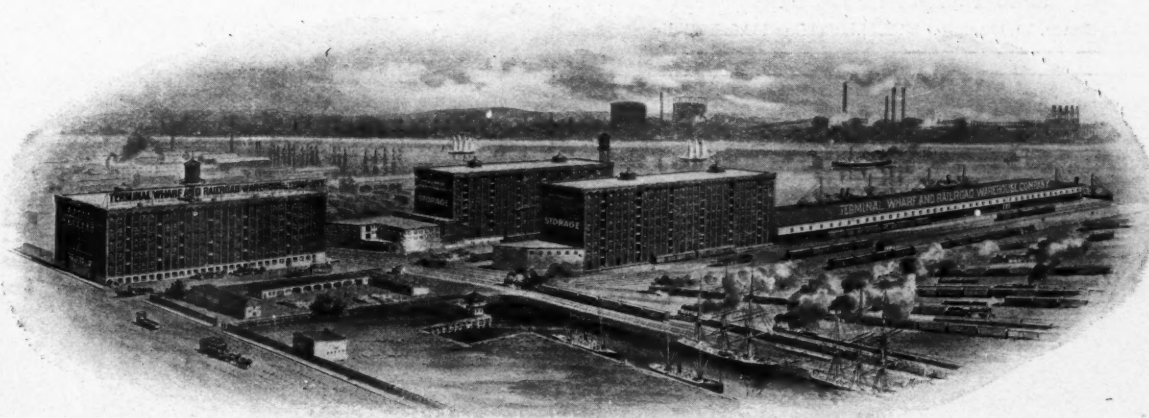
GEORGE S. LOVEJOY, Manager, General Store Department.
Main Office: 133 Commercial St., Boston, Mass.

BOSTON, MASS.

H. H. WIGGIN, PRESIDENT

S. G. SPEAR, TREASURER

TERMINAL WHARF AND RAILROAD WAREHOUSE COMPANY 50 Terminal Street Charlestown District, Boston



Storage of Wool, Cotton and General Merchandise

LOWEST INSURANCE RATES
 DIRECT TRACK CONNECTIONS
 BOSTON & MAINE R. R.

SHIPPING DIRECTIONS
 MYSTIC WHARF
 BOSTON, MASS.

Fumigation of Foreign Cotton and Cotton Waste

AND OTHER MATERIALS AS REQUIRED
 BY U. S. GOVERNMENT

CARTAGE TO AND FROM FREIGHT STATIONS AND BOAT LINES

WEIGHING, SAMPLING, AND ALL SERVICES USUALLY PERFORMED BY AN UP-TO-DATE WAREHOUSE

We will Lease or Build to Suit Tenants

HOLYOKE, MASS.

Holyoke Warehouse Co.

Park and Crescent Streets

Modern Fireproof
Warehouse

B. & M. R. R. Siding

We specialize in Merchandise Distribution, Pool Cars or Spot Stocks, Yard Storage, New Autos, Trucks, Farm Implements and Machinery.

TRY OUR SERVICE

Heavy Haulage

Truck Service

NEW BEDFORD, MASS.

NEW BEDFORD STORAGE WAREHOUSE CO.

Modern Sprinklered Warehouses, Approximately 400,000 sq. ft. Floor Space.

Low Insurance Rates

Excellent Rail and Water
Connections

N. Y., N. H. & H. R. R. and New Bedford Line, from Pier 40, North River, New York. Daily sailings.

We operate a large, modern pier and storage shed on 25-ft. channel.

Distribution and Pool Car
Shipments Solicited

HOLYOKE, MASS.

Sheldons Transfer & Storage

ESTABLISHED 1870

Main Office 637 Main St. Branch Office 81 Main St.

SPECIALISTS IN POOL CARS

Storage Space, 50,000 sq. ft. N.Y.N.H. & H. and B. & M. Sidings

Pick Your Consignee

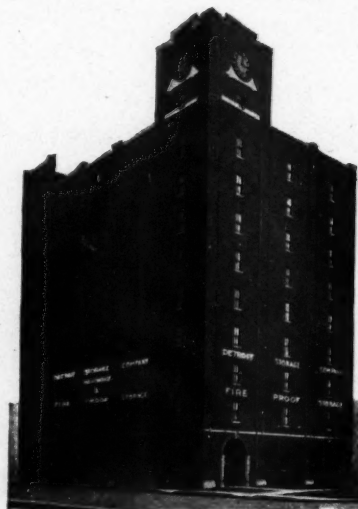
from

the companies listed in this section—They are the “live wires” of the field and will handle your shipments promptly and efficiently

DETROIT, MICH.

DETROIT'S LEADING MOVERS.

Detroit Storage Co.



Main Office and Fireproof Warehouse
MOVING, PACKING, SHIPPING
MOTOR EQUIPMENT

Corner East Grand Boulevard and Beaubien St.,
DETROIT, MICH.

BAY CITY, MICH.

G. VAN HAAREN

V. VAN HAAREN

P. Van Haaren & Sons Storage Co.
FIRE PROOF STORAGESteel Compartments for Furniture Storage
GENERAL TRANSFER LINE
MOTOR TRUCK SERVICE

Est. 1880

BAY CITY, MICHIGAN

DETROIT, MICH.**GENERAL STORAGE AND
CARTAGE CO.**

Main Offices:

Grand River and Lorain Avenues

GENERAL MERCHANDISE STORAGE

Forwarding, Distributing and Reshipping Agents. Custom
House Brokers—Expert Traffic Service**SHIP US YOUR CARLOADS FOR DISTRIBUTION**50 Car Track Space on M. C. R. R. and Grand Trunk
Motor Trucks—1 to 10 Tons Capacity**MINNEAPOLIS, MINN.****The Gateway to
the
Great Northwest****We can handle your
Entire Distribution
Throughout the
NORTHWEST**Consign Your Shipment to
**THE MINNEAPOLIS TERMINAL
WAREHOUSE COMPANY**
Minnesota Transfer**DETROIT, MICH.****TURNER CARTAGE COMPANY**Phone
Main
2660

Shipments of household goods and merchandise will be handled under personal supervision of company officials.

334-340 Lafayette Blvd., DETROIT, MICH.**GRAND RAPIDS, MICH.****Elston Packing & Storage Co.**

Storage household goods and merchandise. Seven warehouses with over 200,000 sq. ft. of floor space.

Members of the Illinois Warehousemen's Assn., New York Warehousemen's Assn. and American Warehousemen's Assn.
GRAND RAPIDS, MICH.**GRAND RAPIDS, MICH.****Shank Fireproof Storage
Company**Largest Fireproof Storage Warehouse in Western Michigan.
Merchandise and Household Goods.

Members I. F. W. A.

LANSING, MICH.**Fireproof**

Storage & Transfer Company

Central Michigan Distributing point for pool car shipments. We have the only modern fireproof warehouse in the city for storage of Merchandise, Automobiles, H. H. Goods. Private siding on P. M. R. R. connecting with M. C., N. Y. C. & G. T. Railroads.
MOTOR TRUCK SERVICE**ST. PAUL, MINN.****The Central Warehouse Co.**

Minnesota Transfer, Minn.

**Merchandise, Bonded and Cold Storage
Industrial Sites**

At the junction of nine railroads, midway between the Twin Cities. L. C. L. shipping without carting. Motor trucks for local deliveries. 40 acres of ground. Six miles of trackage operated by our electric locomotives.

KANSAS CITY, MO.**QUICK ACTION WINS
IN THE BATTLE FOR BUSINESS!**

We borrow other people's shipping and distribution problems and turn them into results.

Fireproof Warehouses and Distribution Docks.

L. T. CRUTCHER WAREHOUSE CO.

Distribution and Warehousing

1411 St. Louis Ave.

Kansas City, Mo.

KANSAS CITY, MO.

Are You Giving Your Customers Service?

The present congested conditions of our railroads and slow movement of less than carload freight, and the possibility of embargoes on many commodities, make it more imperative than ever that you carry suitable stocks of your goods at important Western distributing centers to properly take care of your trade in that territory.

We invite you to make use of our warehouse as a branch of your own establishment for this purpose. Our building is of modern fireproof construction and equipment—automatic sprinkler system—low insurance rates—free switching of carloads. Ample teaming equipment and twenty years of knowing how, insures prompt, efficient and satisfactory service.

D. A. MORR

TRANSFER & STORAGE COMPANY

Members { Central Warehousemen's Club
American Chain of Warehouses
American Warehousemen's Association
Illinois Furniture Warehousemen's Association
New York Furniture Warehousemen's Association

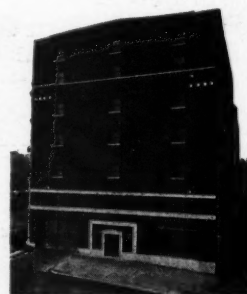
Please mention this paper

KANSAS CITY, MO.

Fireproof Warehouse
Convenient to All
Freight Depots
Send your consignments in our care
Members of I. F. W. A.

L. Leritz & Son

2616-18-20 Warwick



Ins. Rate 22c

Pick Your Consignee

from the companies listed in this section—they are the "live wires" of the field and will handle your shipments promptly and efficiently.

It is also worth your while to earn their reciprocity.

ST. LOUIS, MO.

A Transfer Company with an Ability to Serve

ST. LOUIS
America's Fourth
Largest City

Nine Freight Depots; One Mile of Platforms
More than 250,000 Square Feet of Storage
and Warehouse Space
225 Teams and 75 Motor Trucks

We are especially well equipped for the prompt handling of consolidated cars for distribution both locally and for points beyond. When consigned care Columbia Transfer Company (La Salle Street Station) you get the benefit of
Daily Package Car Service
from St. Louis to the West, Southwest and Southeast.

**Leased Motor Truck
Service** - By Hour, Day or Contract -

**COLUMBIA
TRANSFER CO.**

**America's Largest
Transfer
Organization**

\$2,000,000 Capital

BILLINGS, MONTANA

Billings Warehouse & Trading Co.

Incorporated

204-216 North 21st Street

Branch House Service for
National Distributors

Investigate the immense and rapidly developing territory for which Billings is the best distribution center.

MISSOULA, MONT.

Security Warehouse & Transfer Co.

(Incorporated)

Warehousing of every description: Storing, Packing, Carting, Shipping. R.R. Siding. Manufacturers' distributors. We solicit your Western Montana shipments.

OMAHA, NEBR.

Gordon Fireproof Warehouse & Van Co.

Main Office: 219 NORTH 11th STREET

Six warehouses covering over one city block. 200,000 square feet of floor space. Four warehouses equipped with automatic sprinkler systems.

Warehouses served by private tracks on the C. B. & Q. and the C. & N. W. (joint track); and the Illinois Central. All roads absorb switching charges.

Accommodations for brokers, jobbers, automobile manufacturers and dealers.

Household Goods Packed, Stored and Forwarded

MOVING — TRANSFER — FORWARDING

MEMBER { New York Furniture Warehousemen's Association.
Illinois Furniture Warehousemen's Association.
Central Warehousemen's Club.
Pacific Coast Furniture Warehousemen's Association.

If Your City Isn't Represented Here

Put it on the shippers' map by inserting your card in this space.

OMAHA, NEBR.



NEW FIRE PROOF BUILDING

1,500,000 Cubic Feet Storage and Leasing Space, Sample Rooms, Office Space, Merchandise, Storage and Distribution Exclusively.

Mercantile Storage & Warehouse Company

Omaha, Nebraska.

We Specialize in Merchandise Distribution

OMAHA, NEBR.

**THE
"CITY OF OPPORTUNITY"**

Represented by the

Pacific Storage & Warehouse Co.

1007-9-11 JONES STREET

We have studied the problems of the national distributor of manufactured articles and merchandise and have both the experience and facilities to care for business of this kind in a way that will satisfy the most critical.

Write us about the goods you have to be distributed in this territory and we shall be glad to quote prices for delivery, storage or reshipping.

MOTOR TRUCK SERVICE — 75,000 SQUARE FEET OF STORAGE SPACE

Members of the Central Warehousemen's Club

ATLANTIC CITY, N. J.**ELDRIDGE EXPRESS and STORAGE WAREHOUSE CO.**

Office: 110 N. South Cardina Avenue
Inter-City Auto Service Heavy Hauling



Railroad
Siding and
Storage Yard

Storage for
Goods and
Merchandise

Piano Moving

Phone 108

HOBOKEN, N. J.**FREIGHT STORAGE**

5 BLOCKS FROM D. L. & W. FERRIES

LOW INSURANCE
RATES ON REQUEST

HUDSON STORES, INC.

Office and Warehouse:

Ferry Street and Park Avenue, Hoboken, N. J.

Phones—Hoboken 1810-1811-1812

CAMDEN, N. J.

Established 1903

Troth's Model Warehouses

5th and Byron Streets

MANUFACTURERS' DISTRIBUTORS

Correspondence Solicited
Direct Delivery Service Throughout Philadelphia

NEWARK, N. J.

Estab. 1850 Jos. V. Lupo, Pres. & Treas.
John F. Lupo, Sec.

JOB De CAMP, INC.

80 PARK PLACE

Transfer of Household Goods Storage of Household Goods
Freight, Heavy Haulage, Mdse., New Autos, Imple-
Motor Service ments, Yard Storage.

Factory Distributors

N. J. W. A. Member of A. W. A. and N. Y. F. W. A.

EAST ORANGE, N. J.

Established 1887

R. T. BLAUVELT, Pres.

LINCOLN STORAGE WAREHOUSES

FIREPROOF NON-FIREPROOF MOTOR EQUIPMENT

Members of New Jersey—New York—Illinois—Southern
Warehousemen's Associations

Principal Office, 85 MAIN STREET

If the City to which you are shipping is not represented in this list, choose the nearest as the geographical arrangement will help you.

NEWARK, N. J.**Here's a New York Warehousing Service at Reasonable Rates****Newark's Unexcelled Rail Facilities**

These lines have full terminal service in Newark

Lehigh Valley
Pennsylvania
Delaware, Lack-
awanna and Western
Central of New
Jersey, Erie

You storage men know "sky high" New York unloading and distribution cost. But do you know you can get New York service from the Lyon Storage Company at Newark, N. J., at way below New York rates?

You can, and you will get service, with all the "trimmin's." Better write us to-day, and open up this big opportunity for economizing, right away.

Newark has as ample railroad facilities as are found on the Atlantic seaboard. New-

ark is only a few minutes from Greater New York—almost a part of it. Newark feeds 1½ million people.

You can use the Lyon Storage Company facilities as a reservoir from which to make your New York and other Eastern distribution. Water facilities are offered at most reasonable charge.

We have the trucks to put your product anywhere in the Greater New York field, as cheaply as you could move it from any point within Greater New York.

A letter of inquiry, stating your needs, will bring you an outline of Lyon Storage Company facilities. We can save you money. Write us today.

NEWARK, N.J.

NEW YORK CITY

LYON STORAGE COMPANY

97 Canal St.

Newark, N. J.



NEWARK, N. J.

ESTABLISHED 1864

SHIP TO NEWARK'S
LEADING FURNITURE WAREHOUSE

**KNICKERBOCKER STORAGE
WAREHOUSE COMPANY**

JOHN MULLIGAN, Pres. GEO. L. BARBER, Gen. Mgr.
100-106 Arlington Street

MOVING PACKING SHIPPING
MOTOR EQUIPMENT

MEMBERS N. Y. F. W. A. and N. J. F. W. A.

NEWARK, N. J.

The McGANN Co., Inc.

Offices, 100 Front Street Telephone 1620 Market.
Merchandise Storage, Trucking and
Distributors

NEWARK, N. J.

Model Storage Warehouses

54-56 Belleville Ave.

NEWARK, N. J.

Known All Over the
UNITED STATES
for their
EFFICIENCY

IN HANDLING HOUSEHOLD GOODS SHIPMENTS
IN NEW JERSEY

NEWARK, N. J.

F. H. Mooney, President

Est. 1882

Mooney's Storage Warehouses

Offices: 556-8 Market Street, Newark, N. J.

Phones: 4370-1 Mulberry

Merchandise Storage, Distributors. Centrally located to
all Railroad Terminals. Daily Motor Service to New York
City and Vicinity.

TRENTON, N. J.

"Expert Service"

Arcade Express & Storage Co.

Harry A. Douglass, Prop.

Merchandise and Furniture Storage Warehouse

Distributors and Forwarders
In Main Business Section of City

Motor Van Service

13-17 East State Street, Trenton, N. J.

Bill via any R. R.

TRENTON, N. J.

**Petry
Express & Storage Co.**

(INCORPORATED)

STORAGE WAREHOUSES

MERCHANDISE and HOUSEHOLD GOODS

MOVERS—PACKERS—SHIPPERS

MOTOR VAN SERVICE

Carloads Distributed. Manufacturers' Distributors.
Members N. Y. F. W. A. and I. F. W. A.

ALBANY, N. Y.

SECURITY

STORAGE & WAREHOUSE CO., INC.

Jas. G. Perkins, Custom House Broker
1 DEAN STREET

Storage, Transferring and Forwarding

Direct Track Facilities Pool Car Distribution

BINGHAMTON, N. Y.

THREE
WAREHOUSES
33 Years in Business

Merchandise
Distribution
and Pool Car
Shipments Given
Special
Attention

Storage of House-
hold Goods,
Merchandise,
Implements and
Machinery.
Auto Trucks
Heavy Haulage



COLE & GRAY

203 State Street

Binghamton, N. Y.

BINGHAMTON, N. Y.

MOLLEN TRANSFER & STORAGE CO.

—P. O. Box 872—

TWO WAREHOUSES
SIDING ON ERIE WE SPECIALIZE IN

Merchandise Distribution—Pool Cars—also all classes Transfer Work.
Chamber of Commerce—Illinois and New York
Members—Furniture Warehousemen's Association.
American Warehousemen's Association.

BINGHAMTON, N. Y.

Member Chamber of Commerce

JOHN B. SOUTHEE

STORAGE WAREHOUSE AND VAN OFFICE

MOVING AND TRUCKING OF ALL KINDS

178 STATE STREET

Office Phone 1366
House Phone 1799

Residence,
60 Moeller St.

If the City to which you are shipping is not represented in this list, choose the nearest as the geographical arrangement will help you.

BRONXVILLE, N. Y.

Gramatan Warehouse

**New, Modern and Up-to-Date Furniture
Warehouse Under Construction**

ORDERS ACCEPTED FOR COMING SPRING

PACKING—MOVING—STORAGE

R. R. Siding on N. Y. Central R. R.

**FRANK B. VALENTINE
MANAGER**

Telephones:
Day—Bronxville 1456
Night—Mt. Vernon 328-M

BROOKLYN, N. Y.

Established 1889

**Chas. D. Strang's
Montauk Storage Company**

195 So. PORTLAND AVE.

Send your shipments to Brooklyn in my care.
Both your customers and yourself will receive
prompt, careful and courteous attention.

**Storage, Moving, Packing and
Shipping of Household Goods.**

N. Y. F. W. A.

I. F. W. A.

S. F. W. A.

BROOKLYN, N. Y.

Cable Address, *Jenkinis*
Western Union

Long Distance Phones
3100-3101-3102 Bedford



ABSOLUTELY FIREPROOF

Long Island Storage Warehouses

Nostrand and Gates Avenues

BRANCH WAREHOUSES

881-891 Park Avenue

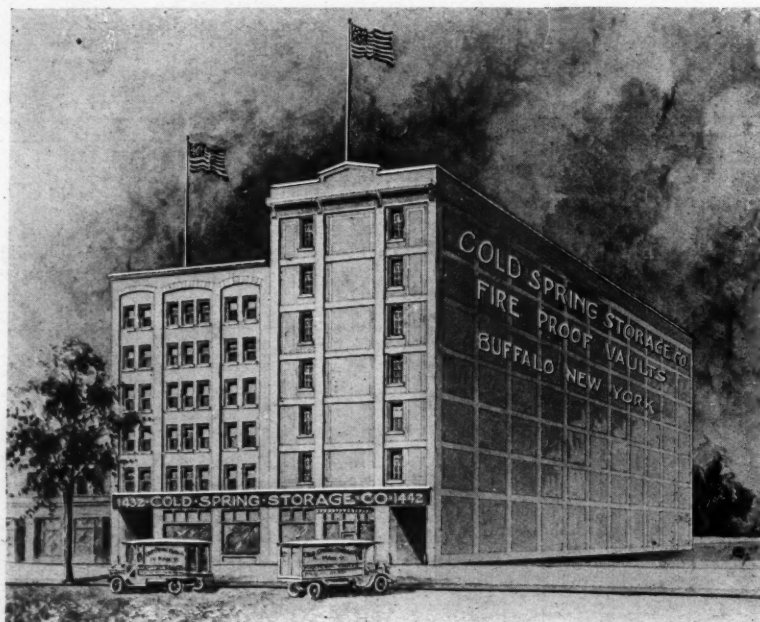
781-789 Kent Avenue

To save delay in consignments for delivery to any part of
New York City or Brooklyn, mark goods in our care to "Eastern
District Terminal, Brooklyn." This is the center of Greater
New York—no delay due to congestion.

Try shipping this way. We know

BUFFALO, N. Y.

WE WILL LOOK AFTER YOUR INTEREST AT BUFFALO



**EXPERTS in storage, moving, packing
and shipping household goods of every
description.**

Members of Buffalo Chamber of Commerce, Illinois Furniture Ware-
housemen's Ass'n, New York Furniture Warehousemen's Ass'n.

Cold Spring Storage Company

J. W. POWELL & SON, Props. & Mangrs.

After

25 Years' Efficient Service
We have just completed a

SEVEN STORY

"UP TO DATE"

**FIRE PROOF
WAREHOUSE**

The best in existence to-day; the last
say in storage warehousing up-to-the-
minute.

NOW

With our trained corps of experienced
and expert workmen, our five ware-
houses, our large fleet of auto moving
van trucks, and unequalled facilities

WE ARE AT YOUR SERVICE

and solicit your Buffalo shipments.

BUFFALO, N. Y.

BUFFALO
STORAGE & CARTING COMPANY
 STORAGE, TRANSFER AND
 FORWARDING
 Warehouse on New York Central Tracks

BUFFALO, N. Y.

O. J. GLENN & SON
 Everything in the Line of Moving,
 Carting, Packing, Storage
 OFFICE: 204 TERRACE STREET

BUFFALO, N. Y.

Monarch Storage & Warehouse Co., Inc.
 "SERVICE"
 In distribution of goods for National Merchandisers.
 286-308 Elm St., Buffalo, N. Y.

ELMIRA, N. Y.

WE SHIP SUDDEN
 Located Main Line—D. L. & W. R. R. and
 Erie, Pa., L. V. railroads.
 DISTRIBUTING AND WAREHOUSING
 Best Warehouse in the Southern Tier.
 Low insurance.
 Reference: Second National Bank,
 Chemung Canal Trust Co.
 and many mercantile houses.
JOSEPH BIMBERG SONS
 Elmira, N. Y.

ELMIRA, N. Y.

Elmira
Storage & Sales Co., Inc.
BEST DISTRIBUTING POINT in Western New
 York and Pennsylvania.
 Warehouse, 50,000 square feet floor space, can ac-
 commodate 100 cars of merchandise.
 Free switching privileges D., L. & W., Erie, Penna.
 and L. V. railroads. Switch enters building; can
 load and unload under cover.
General Merchandise and Storage. Forwarding
and Transferring a specialty.
 Competent help in office and warehouse. We can
 be used as a branch house at no extra expense.
 We do our own trucking.

FLUSHING, N. Y.

Blackham Storage & Trucking Co.
 INC.
 We do a general storage, moving, carting and
 packing business covering Flushing and
 Long Island. Try our service, you'll like it.
 OFFICE: 72-74 GROVE ST., FLUSHING, NEW YORK

GLENS FALLS, N. Y.

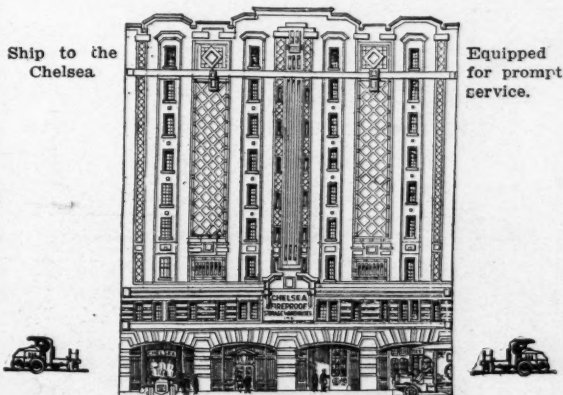
H. A. STEVENS & SON
 Furniture and Merchandise Storage. Local
 and Long Distance Moving Packing, Crating.

NEW YORK, N. Y.

"Every Room is an Actual Vault"
Atlas Fireproof Storage
Warehouse Co.
 157 159 West 124th Street (near Seventh Ave.)
 Moving—Packing—Storing—Shipping
 A terminal of every railroad in immediate
 vicinity. Bill "Harlem Terminal." Auto-
 mobiles taken in dead storage.
 Consign your shipment to us for proper
 attention.
 NYFWA VOA

NEW YORK, N. Y.

Chelsea Fireproof Storage Warehouses, Inc.
COMPLETE SERVICE TO SHIPPERS
 Storage, Moving, Packing, Shipping, Express
 and General Trucking



Our Harlem Warehouse

Chelsea Fireproof Storage Warehouses, Inc.
 LOUIS SCHRAMM, Pres. WM. F. HAHN, Secy and Treas.
 Main Office Harlem Branch
 426-434 West 26th St. 112-120 West 107th St.
 Members of
 New York Furniture Warehousemen's Association
 Illinois Furniture Warehousemen's Association
 The Merchants' Association of New York

NEW YORK, N. Y.

Julius Kindermann & Sons
 Three large fireproof storage warehouses adjacent
 to Washington Heights and all counties
 in Westchester section
 1360-62 Webster Avenue, near 170th Street, Bronx

NEW YORK, N. Y.

**MORGAN & BROTHER**

Storage Warehouses
and Motor Vans

MOVING STORAGE PACKING

Our reputation in handling collections on consignments is your guarantee in selecting us as your correspondent in New York City

*Furniture and Works of Art Boxed
and Shipped to all Parts of the World*

230-232-234-236 WEST 47th STREET
TELEPHONE 52 BRYANT Near Broadway

Cable Address: MORGANWARE

Members:

New York Furniture Warehousemen's Association
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Mott Haven Storage Warehouse Co.

Fireproof and Non-fireproof Warehouses
Factory Distributors — Motor Service
Adjacent to all Bronx Terminals. Economic and
Satisfactory Service
THIRD AVENUE AND 140th STREET

NEW YORK, N. Y.

Phone Spring 8732-8733

North River Warehouses, Inc.

606-608-610 Washington Street, New York City
Merchandise Storage and Distribution
Centrally Located To All RR Terminals

NEW YORK, N. Y.

Vandam Warehouse Co., Inc.

General Offices—No. 29 Broadway
NEW YORK CITY

Phone Whitehall-353.

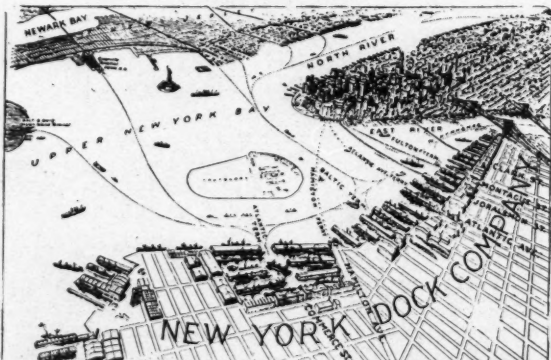
8 CITY WAREHOUSES

also

Waterfront Pier and Warehouses:
MARINERS HARBOR, STATEN ISLAND

NEW YORK, N. Y.

**Largest Bonded and Free Warehouse
and Pier System in the Western
Hemisphere**



Occupying approximately 2½ miles of the Brooklyn waterfront.

159 BONDED AND FREE WAREHOUSES having a storage capacity of 65,435,000 cubic feet or 116.2 acres of floor space.

34 PIERS
20 MANUFACTURING BUILDINGS
3 RAILROAD TERMINALS

Buildings for lease with lighterage and railroad facilities

NEW YORK DOCK COMPANY

44 Whitehall Street, New York
Calendar showing map of New York Harbor sent on request

NIAGARA FALLS, N. Y.

WILLIAM YOUNG

TRANSFER AND STORAGE OF
HOUSEHOLD GOODS
MACHINERY AND SAFE MOVING A SPECIALTY
"Unexcelled SERVICE"

ROCHESTER, N. Y.

Arthur S. Blanchard, President and Treasurer

Blanchard Storage Co., Inc.

Storage Moving HOUSEHOLD GOODS Packing Shipping
Rochester "Chief" Rug and Carpet Cleaners
Allen and N. Washington Streets

Members New York and Illinois Furniture Warehousemen's Association

ROCHESTER, N. Y.

Storage, transfer and forwarding of general merchandise. Only warehouse situated in center of city on N. Y. C. R. R. siding. Equipped with sprinkler system. Lowest insurance rates.

MONROE WAREHOUSE CO., INC.,

55-83 Railroad Street

Rochester, N. Y.

ROCHESTER, N. Y.

ROCHESTER CARTING CO.

Members New York Warehousemen's Association
Distributors of Car Load Freight
Unsurpassed facilities for Storing, Transferring and Forwarding
Merchandise and Household Goods
Two Large Storage Warehouses
162-164 ANDREWS STREET

ROCHESTER, N. Y.

JOSEPH A. SCHANTZ COMPANY

173-219 CENTRAL AVENUE



We have every facility for handling your Rochester shipments

Two Fireproof Warehouses
Two Non-fireproof Warehouses
Large Fleet of Modern Motor Vans

By mailing your Rochester bills of lading to us you are guaranteeing the most prompt and courteous service to your patrons. You are also protecting your own interests, because we will return all collections promptly and watch the details carefully.

Member of New York Furniture Warehousemen's Ass'n.

SYRACUSE, N. Y.

Flagg Storage Warehouse

TWO FIREPROOF WAREHOUSES

STORAGE OF GENERAL MERCHANDISE
and HOUSEHOLD GOODS

We are in position to render quick and efficient service.

Centrally located to all jobbers and freight houses.

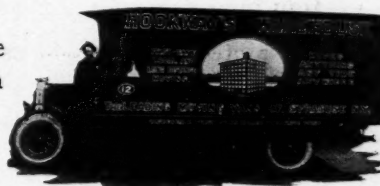
Correspondence Solicited.

100 Townsend St.,

Syracuse, N. Y.

SYRACUSE, N. Y.

Merchandise
Distribution
Given
Especial
Attention



Storage of Household Goods, Merchandise and Machinery
**IF YOU WANT REAL SERVICE—TELL ME
YOUR REQUIREMENTS**

**HOOKWAY'S
Storage Warehouse**

725 E. Water St.

SCHENECTADY, N. Y.

SCHENECTADY

is a natural Distributing Center. We make a specialty of L. C. L. Forwarding and Distribution of Pool Cars.

Two up-to-date Warehouses. Track connections with all Railroads entering City.

Storage of Household Goods, Merchandise, Implements, Yard Storage. Heavy Haulage. Motor Service.

**SCHENECTADY STORAGE &
TRUCKING COMPANY**

SYRACUSE, N. Y.

King Storage Warehouse, Inc.

Opposite N. Y. C. West St. Station

**COMMERCIAL and FURNITURE
STORAGE
PRIVATE RAILROAD SIDINGS**

DISTRIBUTING SERVICE

Carload or less carload shipments will receive prompt and careful attention. This branch of warehousing has been a specialty with us for over twenty years. We maintain our own delivery service.

HOUSEHOLD GOODS

We solicit your Syracuse business. Motor delivery service. Careful attention to collections. Satisfaction to yourself and customer guaranteed.

**FOR SAFETY WE SHIP FURNITURE IN THE KING SHIPPING
CASE**

SCHENECTADY, N. Y.

W. CADY SMITH
123 WALL ST.

DISTRIBUTING STORAGE Merchandise RESHIPING PERORDER

For Wholesalers and Manufacturers.

Moving Safes, Boilers and Heavy Machinery a Specialty.
Household Goods Stored and Shipped. Motor Service

**If Your City Isn't
Represented Here**

Put it on the shippers' map by
inserting your card in this space.

**Pick Your
Consignee**

from the companies listed in
this section—they are the "live
wires" of the field and will han-
dle your shipments promptly
and efficiently.

SYRACUSE, N. Y.



CONSIGN your Syracuse shipments of merchandise or Household Goods to us. Railroad siding in connection with our warehouse.

Mail bills of lading direct to us. We make no charge for collections and remit promptly.

A big transfer job does not stagger us. We own and operate a fleet of auto trucks to facilitate modern and reliable service.

Yours for Co-operative Service

SYRACUSE FURNITURE & FORWARDING CO., Inc.

270-272 James St., Syracuse, N. Y.

STORAGE PACKING SHIPPERS AGENTS

UTICA, N. Y.

UTICA CARTING & STORAGE COMPANY

Storage, Trucking, Forwarding,
Shipping, Rigging, Transferring,
Distributing, Checking, Packing

MOTOR VANS FOR LONG DISTANCE

Members New York and Illinois Associations.

RALEIGH, NORTH CAROLINA

Carolina Storage & Distributing Co.

Raleigh (Bonded) North Carolina
We store, reship and distribute all classes of freight. Modern brick warehouses located on railroad tracks. Pool car distribution a specialty. Being centrally located, reaching a population of over 1,500,000 within a radius of 100 miles, and having excellent railway service. Raleigh is most logical distributing point for this territory.

MINOT, N. D.

CONSIGN YOUR SHIPMENTS TO THE MINOT WAREHOUSE & STORAGE FACTORY DISTRIBUTORS

Household Goods and Merchandise Stored. Reinforced concrete building with brick walls and hollow tile inner walls.

PRIVATE TRackage MOTOR EQUIPMENT

TROY, N. Y.

EMPIRE STORAGE WAREHOUSES

TROY, N. Y.

GENERAL STORAGE AND DISTRIBUTING

UTICA, N. Y.

Consign Utica Shipments to

JONES-CLARK TRUCKING AND
STORAGE CO., Inc.

127-135 Hotel St.

SPECIAL ATTENTION given to Merchandise Distribution and Pool Car Shipments. Storage of Merchandise, Furniture, New Autos and Machinery.

MEMBERS NEW YORK AND ILLINOIS ASSOCIATIONS

U. S. C. Bonded

Bill Via N. Y. C., D. L. & W., N. Y. O. & W.

CANTON, OHIO

CUMMINS STORAGE COMPANY

STORAGE, DRAYING, PACKING AND
FREIGHT HANDLING A SPECIALTY

Unsurpassed Facilities for Handling Pool Cars

310 EAST NINTH STREET

CINCINNATI, OHIO

Do you want to carry a stock of merchandise in Cincinnati? If so, we can look after it for you. Our warehouse is located on the Pennsylvania Railroad. We can reship to Southern points, etc.

The Wallace Transfer & Forwarding Co.
222 & 224 East Front Street

If Your City Isn't Represented Here

Put it on the shippers' map by
inserting your card in this space.

Pick Your Consignee

from the companies listed in
this section—they are the "live
wires" of the field and will han-
dle your shipments promptly
and efficiently.

CINCINNATI, O.

STORAGE

Fireproof and Non-Fireproof

Business Established in 1867 and built up by

A SERVICE THAT SATISFIES

Prompt Deliveries by Motor
Complete Transfer Facilities

Member
of
New York Furniture
Warehousemen's
Association
and
Illinois Furniture
Warehousemen's
Association



**FRED
PAGELS**

937 West 8th St.

CLEVELAND, OHIO

SERVICE IS THE THING

For You and Your CLEVELAND Customers

**LET US SERVE THEM AS
THEY SHOULD BE SERVED**

Our Equipment—Fireproof and
Non-Fireproof Storage. Motors
and Horse-Drawn Vans.

Our Organization is complete and
is more than ample for the largest
and most difficult proposition.

We Conserve Your Interests

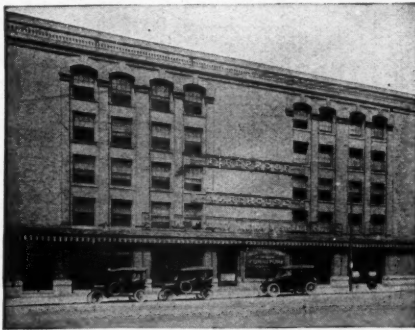
THE CENTRAL STORAGE WAREHOUSE CO.

1843 East 55th Street

5601 Hough Avenue

CINCINNATI, OHIO

"STACEY FIRST"



SERVICE
FIREPROOF AND NON-FIRE-
PROOF WAREHOUSES

MODERN MOTOR
VAN EQUIPMENT

RELIABILITY

Established 1891 Investment \$250,000
Your interests carefully protected

STACEY STORAGE CO.

2333 Gilbert Avenue

CLEVELAND, OHIO

THE CLEVELAND STORAGE CO.

Established 1883

Offices: Guardian Building

Mercantile Storage Only

Pool Cars for Distribution
and Reshipment

Convenient to Business and Shipping District

LOW INSURANCE RATES
Sprinkler System

3 Warehouses, Private Siding,
C. C. C. & St. L. R. R.

Under Railroad Rules in effect October, 1918,
all roads absorb carload switching charges.

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MOTOR TRUCKS GIVE BETTER SERVICE.

WE USE THEM

The
**KNICKERBOCKER
STORAGE CO.**
7724 DETROIT AVE.

The
**LINCOLN FIREPROOF
STORAGE CO.**
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The
**LAKE SHORE MOVING
AND STORAGE CO.**
664 EAST 105TH ST.

The
**SCOTT BROS. FIRE-
PROOF STORAGE CO.**
1838-40 EAST 55TH ST.

LAND.O

FIREPROOF WAREHOUSES GIVE BETTER PROTECTION. WE HAVE THEM

The
NEAL FIREPROOF
STORAGE CO.
7208-16 EUCLID AVE.

5 LARGE WAREHOUSES

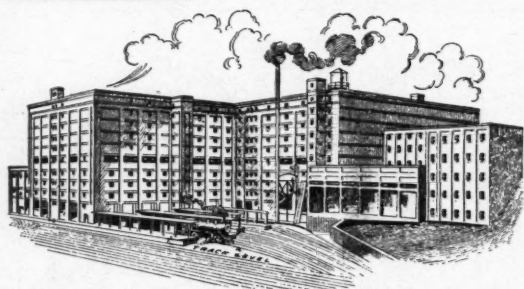
The
REDHEAD
STORAGE CO.
2041 EAST 105TH ST.

HOUSEHOLD GOODS EXCLUSIVELY

The
EUCLID AVE. FIRE-
PROOF STORAGE CO.
11605-09 EUCLID AVE.

WINDERMERE
TRANSFER, MOVING
AND STORAGE CO.
14136 EUCLID AVE.

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3,000,000 cubic feet General Storage and Leasing Space.

1,250,000 cubic feet Cold Storage Space.

62 Car Capacity at one time.

New, Fire Proof Building

SERVICE

Is all we have to sell.

We solicit your business

Ninth Street Terminal Warehouse Co.

WM. J. HOGAN, President

Cleveland, Ohio

COLUMBUS, OHIO

THERE IS
NOTHING TOO LARGE
NOR TOO SMALL
FOR US TO HANDLE

**THE BUCKEYE
TRANSFER & STORAGE COMPANY**

COLUMBUS, OHIO

Safety First

**The Fireproof
Warehouse & Storage Company**
1018-30 North High Street
Columbus, Ohio

TRANSFERRING — STORING — PACKING

We have one of the finest warehouse plants in the state; being steam heated throughout, equipped with a sprinkler system, absolutely fireproof. The cheapest rate of insurance. Located handy to all railroads, we are able to deliver the best service obtainable anywhere. We solicit your shipments to our city and assure you we will reciprocate. P. A. DOLLE, General Manager.

Motor Truck Service

Vaults for Valuables

Private Rooms

COLUMBUS, OHIO

**THE
KUTSCHBACH-MCNALLY CO.**
Complete Facilities for Storing and Forwarding
HOUSEHOLD GOODS and MERCHANDISE

Siding on Pennsylvania Tracks

Manufacturers' Distributors

MOTOR Equipment

Member Interstate Warehousemen's Association

COLUMBUS, O.

The Merchandise Storage Co.
Distributing & Warehousing Merchandise Only

Located on Big 4 Tracks

W. W. FAIRCHILD, Mgr.

Office and Warehouse, 33 Vine St.

DAYTON, OHIO

THE LINCOLN STORAGE CO.
"Fireproof"

BIG 4 TRACK IN BUILDING. Members N. Y. & I. F. W. A.

313-315 EAST FIRST STREET

A. B. Compton, Vice-President

DAYTON, OHIO

THE UNION STORAGE CO.

U. S. BONDED

BAINBRIDGE, BACON & STATE STREETS

MERCHANDISE STORAGE TRANSFER DISTRIBUTION

MANSFIELD, OHIO

**THE COTTER
TRANSFER AND STORAGE CO.**

FIREPROOF AND NON-FIREPROOF
WAREHOUSES

Furniture and Merchandise Storage

Motor Trucks

Heavy Hauling

Distributing

The Cotter System

Members New York, Illinois and American Warehousemen's Assns.

SANDUSKY, OHIO

The Island & Terminal Transfer Co.

JOHN A. MILLOTT, MGR.

TRANSFER, DRAYAGE and STORAGE

New Three-story Fireproof Building, also Non-fireproof Buildings

MERCHANDISE AND HOUSEHOLD GOODS

Complete Distributing Facilities

Steamboat Landing and Railroad Siding

SPRINGFIELD, OHIO

Bill All Shipments for Springfield, Ohio, to

**WAGNER
FIREPROOF STORAGE & TRUCK CO.**

Siding on Pennsylvania Lines

Complete Facilities for Distribution of Pool Car Shipments
Moving—Packing—Shipping—Storing
Household Goods and Merchandise

TOLEDO, OHIO

**DEPENTHAL
TRUCK & STORAGE COMPANY**
108 SUMMIT STREET

Member of New York, Illinois, and Southern Furniture
Warehousemen's Associations

TOLEDO, OHIO

THE TOLEDO MERCHANTS' DELIVERY COMPANY

128 SUMMIT STREET
 AUTO SERVICE—FIREPROOF STORAGE
 Household Goods and Automobiles Moved, Packed, Shipped and
 Stored. Safes, Boilers, Machinery and Smokestacks Moved.
 100% SERVICE
 Reference: Second National Bank, or any bank in Toledo

YOUNGSTOWN, OHIO

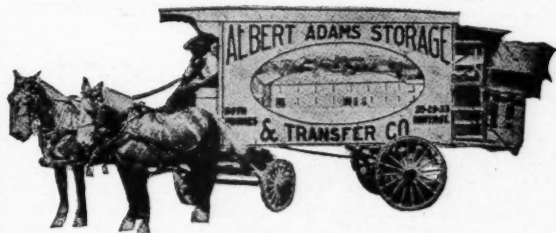


Local and Long Distance Hauling
 Manufacturers' Distributors Carload Distribution

ZANESVILLE, OHIO

ALBERT ADAMS STORAGE AND TRANSFER CO.

25-29-33 Ninth St.
 Merchandise and Household Goods
 Manufacturers' Distributors Carload Distribution
 50,000 Square Feet of Floor Space



CLINTON, OKLAHOMA

100 miles from any other jobbing center. Distributors for
 WESTERN OKLAHOMA
 Clinton is the junction point of C R I & P C & O W, St. L & S F
 and K C M & O Railroads.
 No better point for distribution.
 No better facilities than ours.

CHURCH WAREHOUSE & TRANSFER CO.
 All kinds Transfer and Storage.

OKLAHOMA CITY, OKLA.

Fireproof
 Warehouses for
 Household
 Goods and
 Merchandise.

Members of I. F. W. A.,
 New York, American
 Chain, Central, South-
 ern, Pacific Coast
 Warehousemen's Asso-
 ciation.

O.K. TRANSFER & STORAGE CO.

A. C. WEICKER, President



TULSA, OKLA.

Tulsa Warehouse Company

Inc. \$200,000

Our business is your business in Tulsa.
 We store your merchandise.
 We look after your shipments.
 We collect your drafts and accounts.
 We distribute your samples.
 We make you reliable credit reports.
 We trace your cars and save you demurrage.
 We furnish offices for rent to our patrons.
 We loan you money on your warehouse receipts.
 We give you real service promptly.
 If there is anything else we can do for you, our services
 are at your command.

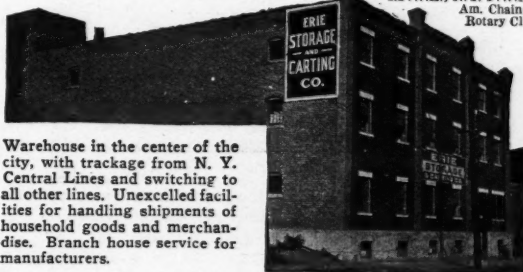
ORRA E. UPP, President and Manager.

ERIE, PA.

ERIE STORAGE & CARTING COMPANY

1502 Sassafras Street

Members of A. W. A.,
 I. F. W. A., N. Y. F. W. A.,
 Am. Chain &
 Rotary Club



Warehouse in the center of the
 city, with trackage from N. Y.
 Central Lines and switching to
 all other lines. Unexcelled facil-
 ities for handling shipments of
 household goods and merchan-
 dise. Branch house service for
 manufacturers.

HARRISBURG, PA.

Pool Cars

Received-Checked-Distributed
 and

Forwarded in Less Than Car Lots

Penna. RR Harrisburg Storage Co.
 Sidings Harrisburg, Pa.

HARRISBURG, PA.

MONTGOMERY & CO.

STORAGE WAREHOUSES

Merchandise Storage—Transferring—Forwarding
 Direct Track Facilities Pool Car Distribution
 Members A. W. A. and American Chain of Warehouses

LANCASTER, PA.

KEYSTONE STORAGE COMPANY

STORAGE—DISTRIBUTORS—FORWARDERS

Merchandise and Household Goods

MANUFACTURERS' DISTRIBUTORS MOTOR SERVICE
 Siding on P. R. R. and P. & R.

OIL CITY, PA.

CARNAHAN TRANSFER & STORAGE COMPANY

R. C. LAY, Proprietor
Piano Moving a Specialty
Distributing and Forwarding Agents; Packing
Fireproof Warehouse

PHILADELPHIA, PA.

ATLAS

STORAGE WAREHOUSE

Office and Warehouse:
Market and Thirty-seventh
Streets,
Philadelphia, Pa.

Member Pennsylvania,
New York, Illinois,
and Southern Furniture
Warehousemen's Associations

Service is the measure of the difference between good work and poor.

Service of the right sort in the storage, moving, packing and shipping of household goods and office furnishings exclusively, constitutes our business.

As it relates to shipments consigned to us, we interpret service to require safeguarding the interests of the shipping warehouse, prompt remittance of collections, fair charges and treatment to customers, and to all—courtesy.

We solicit your Philadelphia shipments.

For West Philadelphia and general city delivery consign C. L. and L. C. L. shipments—P. R. R., 30th and Market Sts. Station; B. & O. R. R., 24th and Race Sts. Station; P. & R. Rwy., 23rd and Arch Sts. Station.

PHILADELPHIA, PA.

We Stand for a Square Deal

International Warehousing Co. General Storage

Delaware Ave., Queen and Swanson St.

Forwarding & Distributing

P. R. R. Siding

PHILADELPHIA, PA.

OUR HOBBY

is the distribution of goods for
National Merchandisers

North Philadelphia Storage Co., Inc.
SHIBE BALL PARK

PHILADELPHIA, PA.

Established 1883

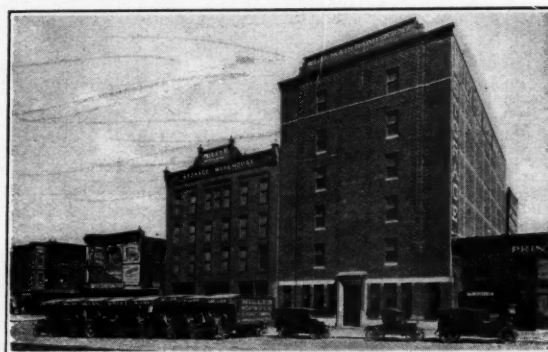
Merchants' Parcel Delivery Co.

1132-34 Race St., Philadelphia, Pa.

Deliver in Philadelphia and Camden, N. J.

Special Prices on Samples, Advertising Matter, Calendars and Publications

PHILADELPHIA, PA.



Our large fleet of motor trucks enables us to render quick and efficient service to your patrons.

We are accessible to all depots and suburbs of our city. Our warehouses are within two blocks of North Philadelphia Station of the Pennsylvania Railroad and the 12th and York Streets Station of the Philadelphia & Reading or the Baltimore & Ohio.

Collections through our office will assure prompt returns.

Fireproof and Non-Fireproof Warehouses

Miller North Broad Storage Co.

2709-2721 North Broad Street

PHILADELPHIA, PA.

PENN STORAGE & VAN COMPANY

2136 MARKET STREET

"Let Wightman do it"

PHILADELPHIA, PA.

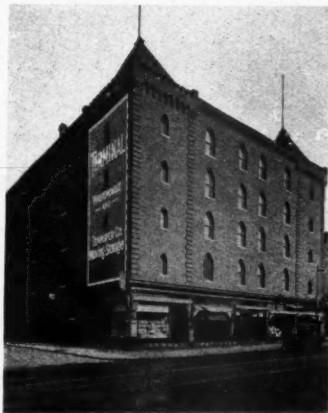
Consign Your Philadelphia Shipments to The Safety Storage Van and Packing Co.

Established 1884

3712-3714 Market Street

Motor Truck Moving—Storage—Domestic and Foreign Packing

PHILADELPHIA, PA.



Columbia Ave. Warehouse
1511-1519
Household Goods Exclusively
Motor Equipment
Moving—Packing—Shipping

TERMINAL WAREHOUSE AND TRANSFER CO.

Green Street and
Delaware Avenue
PHILADELPHIA

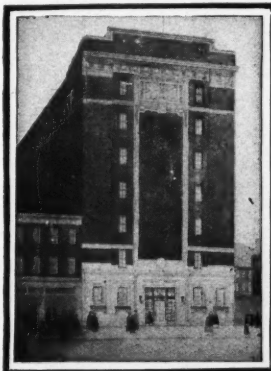


Delaware Ave. and Green St.
Warehouse
Water Front
Pool Car Shipments
Manufacturers' Distributing

9 Warehouses—16 Acres of Floor Space—Trackage Facilities
for 17 Cars

Large Organization. Competent Office Warehouse Staff
Members American Warehousemen's Association—American Chain of Warehouses

PHILADELPHIA, PA.



20th CENTURY

THE LAST WORD IN WAREHOUSES

A solid concrete building. Best location in Philadelphia. A fleet of Pierce Arrow enclosed vans. We operate a large garage adjoining our warehouse capable of accommodating the largest van built. Try us when your van is in Philadelphia. All collections through our office promptly remitted. Members New York Warehousemen's Association and Pennsylvania Warehousemen's Association.

20th CENTURY STORAGE WAREHOUSE CO.

3120-22-24-26-28-30 MARKET STREET
(Opposite West Philadelphia Station P. R. R.)

PITTSBURGH, PA.



Fireproof
I will grow four
more stories



Garage & Stables

BLANCK'S Transfer & Storage Co.

Moving, Packing and Storage
MOTOR TRUCK SERVICE—SEPARATE ROOMS FOR STORAGE



Fireproof

6344

Penn

Ave.

E E



Fireproof

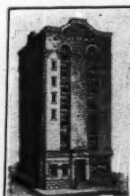
PITTSBURGH, PA.

HASLEY BROTHERS TRANSFER AND STORAGE

939 So. Canal St., N. S.

MOVERS, PACKERS, SHIPPERS OF HOUSEHOLD GOODS
FIRE PROTECTED STORAGE—MEMBERS A. W. A.

PITTSBURGH, PA.

SERVICE TO THE
CORRESPONDENT

CONSISTS in giving the correspondence of those we represent prompt acknowledgment, safeguarding their interests, mailing checks in settlement of accounts, and furnishing final reports of transactions.



THIS service also includes an element of importance:—the handling of shipments upon arrival in a manner conducive to joint customer's approval, whose future business we are always eager to secure.



Ship via Pennsylvania to East Liberty Station, (Pittsburgh, Pa.)

Established 1889

HAUGH & KEENAN
STORAGE AND TRANSFER CO.
CENTRE AND EUCLID AVENUES

PITTSBURGH, PA.

HOEVELER
WAREHOUSE COMPANY
MOVERS AND STORERS

750 MILLVALE AVENUE

PITTSBURGH, PA.

MURDOCH

STORAGE & TRANSFER COMPANY

General Office, and Warehouses

546 NEVILLE STREET
PITTSBURGH, PA.

Branch Warehouse, Wilkinsburg, Pa.

Murdoch Means Service

PITTSBURGH, PA.

Oakland Ex. & Transfer Co.

Packers, Storers and Shippers of

HOUSEHOLD GOODS

229 ATWOOD STREET

PITTSBURGH, PA.

J. O'NEIL EXPRESS & STORAGE

N. S. PITTSBURGH, PENNA.!

Furniture and Piano Moving a Specialty. General Hauling.

NEW FIREPROOF STORAGE HOUSE

Separate Rooms

PITTSBURGH, PA.

Building 100 x 125—8 Stories Front
9 Stories Rear—Garage in Basement—Just Completed



Shanahan
Transfer & Storage Company

Fireproof Storage for Household Goods.

All Separate—1200 Fireproof Rooms.

Furniture Moved and Packed for Shipment.

Motor Vans, Trucks.

Special Heated Piano Floor

Fifth Ave. at McKee Place

(Next Door to You)

Established 1865.

Over 50 Years

PITTSBURGH, PA.

WEBER
EXPRESS & STORAGE COMPANY
GENERAL HAULING

Moving, Packing and Storing of Furniture and Pianos

4620 HENRY STREET

SCRANTON, PA.



Local & Long Distance Hauling
Manufacturers' Distributors—
Carload Distributions
R. F. POST ESTATE.

SCRANTON, PA.
WILKES-BARRE, PA.

Established 1894.

"He Profits Most Who Serves Best"

(Rotary)

The Quackenbush Warehouse Co.

Incorporated

Warehousing of every description. Storing, Packing
Carting, Shipping. R.R. Siding. Manufacturers
Distributors

Correspondence Solicited

Wilkes-Barre, Pa.

Scranton, Pa.

CHATTANOOGA, TENN.

THE CHATTANOOGA TRANSFER & STORAGE CO.

Fireproof Warehouse

Furniture

Merchandise

Packed Stored Shipped

Heavy Hauling

Motor and Horse Drawn Equipment

If Your City Isn't Represented Here

Put it on the shippers' map by
inserting your card in this space.

NASHVILLE, TENN.

E. M. BOND FIREPROOF STORAGE CO.

HOUSEHOLD GOODS AND MERCHANDISE

Modern Fireproof Building

Private Siding With All Rail Connections.

PROVIDENCE, R. I.

CADY MOVING & STORAGE CO.

STORAGE WAREHOUSES

Household Furniture and Pianos

Packing, Crating and Shipping.

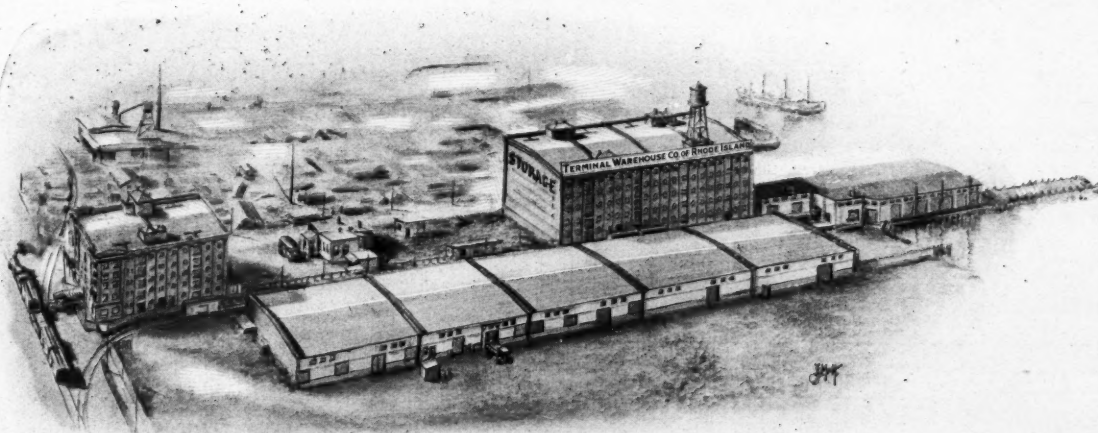
62 to 70 Dudley Street.

If the City to which you are shipping
is not represented in this list,
choose the nearest as the geographical
arrangement will help you.

PROVIDENCE, R. I.

Wm. M. Harris, Jr., Treasurer and General Manager.

W. P. MacDonald, Superintendent.



TERMINAL WAREHOUSE CO. OF RHODE ISLAND

Allen Avenue, foot of Oxford Street on Providence River
PROVIDENCE, RHODE ISLAND, U. S. A.

Several Acres of Yard Storage—Sidetrack Capacity 75 Cars—
Also the most modern Storage Warehouse in New England.

Lowest Insurance Rates

Direct Track Connection

N. Y., N. H. & H. R. R.

Shipping Directions:

South Providence

Rhode Island

Good Depth of Water

Weighing, Sampling and Shipping
by Experts permanently employed.

Our Location centre of the Manufacturing Industries of New England

Deliveries either by Rail or Motor Trucks from our location to most any point in New England

BEAUMONT, TEXAS

**BEAUMONT BONDED
WAREHOUSE CO.**

WE DO POOL CAR DISTRIBUTING, MOVING, PACKING,
SHIPPING AND STORAGE.

Long distance hauling by Motor Trucks. 50,000 feet
storage space. R. R. track in building—no charges for
switching.

BEAUMONT, TEXAS

DALLAS, TEXAS

CARLOAD DISTRIBUTION & STORAGE

Merchandise and Household Goods

**The Inter-State
Forwarding Co.**

Cor. Elm & Jefferson St.

The Center of the Wholesale District

120,000 Sq. Ft.
on T. & P. R. R. Capacity Unloading 12
Cars Per Day.

Maintains an organization for service in all branches of
Warehousing and Distribution

W. I. FORD and R. E. EAGON
Associate Managers

EL PASO, TEXAS

**WESTERN
TRANSFER & STORAGE COMPANY**
1125-31 TEXAS STREET

ONLY FIREPROOF STORAGE IN EL PASO
Forwarders and Distributors—Trucking of all kinds—Distribution
Cars a specialty—Warehouse on Track

**If Your City Isn't
Represented Here**

Put it on the shippers' map by
inserting your card in this space.

FORT WORTH, TEXAS

**Binyon-O'Keefe
Fireproof Storage Company**

Est. 1875

Your consignments to Fort Worth
will receive intelligent service. We
have a siding on the Rock Island Rail-
road with free switching from all lines.
Fireproof warehouse, 90,000 sq. ft.,
yard storage, factory distributors.

Members of

Illinois Furniture Warehousemen's Association
Southern Furniture Warehousemen's Association
Central Warehousemen's Association

FORT WORTH, TEXAS

**Fort Worth Ware-
house & Storage Co.**

INCORPORATED

**Merchandise Distribution, General Storage
Manufacturers' Representative**

**PRIVATE SIDING WITH ALL RAIL
CONNECTIONS**

**Fort Worth with its seventeen railways is the logical
distributing center for Texas and the Southwest.**

Absolutely Fireproof Warehouses

SAN ANTONIO, TEX.

Established 1880

FREIGHT

AUTO SERVICE

STORAGE

**OFFICIAL DISTRIBUTORS
MERCHANTS' TRANSFER CO.**

SAFETY

COURTESY

SERVICE

PETERSBURG, VA.

Southern Bonded Warehouse Corp.

BONDED STORAGE

Distributors

Motor Truck Service

Private Railroad Sidings

Our Negotiable Receipts Acceptable at all Banks

WACO, TEXAS

**MASON
TRANSFER & STORAGE COMPANY**
217-219 JACKSON STREET

Merchandise Storage, Forwarders & Distribution Trucking of all kinds. Warehouse on track. 7 Denby Trucks

WACO, TEXAS

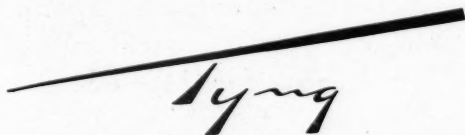
Weatherred Transfer and Storage Co., Inc
Modern Warehouse Facilities—Trackage on all roads
100,000 SQUARE FEET STORAGE SPACE

We do pool car distributing, moving, packing, shipping, storage, long distance hauling by trucks.

SALT LAKE CITY, UTAH

SALT LAKE CITY IS A
NATURAL DISTRIBUTING CENTER

We Make a Specialty
of Carload Distribution



Warehouse and Storage Company

**MERCHANDISE WAREHOUSING AND
DISTRIBUTION
COLD STORAGE**

Served by all railroads

Salt Lake City, Utah

142,000 Square Feet of Floor Space

CHARLESTON, WEST VA.

Mathews Storage & Transfer Co.

Warehousing—Distributing—Forwarding—Transfer
Merchandise—Automobiles—Household Goods
Brick and Concrete Warehouses—Private Ry. Siding.

Members: } American Warehousemen's Ass'n
American Chain Warehouses
Motor Truck and Team Service.

ABERDEEN, WASH.

A. A. STAR TRANSFER CO.

401-403 SOUTH F STREET

ABERDEEN

WASHINGTON

**WE DO EVERYTHING IN THE
LINE OF MOVING**

Our Hobby

Equipped to Handle

Distributors of

CRATING

SAFES

FREIGHT

PACKING

PIANOS

H.H. GOODS

STORAGE

MACHINERY

BAGGAGE

Consign Your Shipments to Us for Proper Attention

SEATTLE, WASH.

**Duggan Transfer
Company**

SEATTLE

TACOMA

Pool Car Distributors

Fire Proof Warehouse

SEATTLE, WASH.

United Warehouse Company

SEATTLE, WASH.

Established 1895

GENERAL STORAGE AND DISTRIBUTING

SPOKANE, WASH.

McAllister Warehouse Company

W. E. Burke, Manager

Commercial Storage and Distributing as You
Want It. Your Methods Are Our Methods.
For satisfactory results ship to us.

THE PURCHASING POWER

of the field carried by

Distribution and Warehouse

is that of an industry with a
total investment of more than

\$1,000,000,000.00

TACOMA, WASH.



WE OWN BOTH WAREHOUSES
 Established 20 years in Tacoma—and know how to handle your requirements
 Storage (bonded and free) Merchandise and H. H. Goods
 Moving and Packing by Experts C. L. & L. C. L. Distribution
 collections Remitted Promptly We Solicit Your Business

TACOMA, WASH.

**PACIFIC STORAGE and
TRANSFER CO., Inc.**
 Merchandise and Furniture Storage

Distributors and Forwarders

Merchandise and Furniture

SEND YOUR POOL CARS IN OUR CARE

Auto Truck and Transfer Service



N. P. RY. SIDE TRACKS
 BROADWAY AND 17th STREET

YAKIMA, WASH.

MILLER & LENINGTON
 CONTRACTORS

DISTRIBUTING and FORWARDING AGENTS

(TRANSFER-STORAGE-WAREHOUSING)

Motor Trucks and Team Equipment for All and Every Kind of Hauling

SHIP IN OUR CARE and let us be "At your service with best of service"

Office: 10 East A Street Sidney Hotel Bldg.
 'Phone 571

YAKIMA, WASH.

J. J. CRAWFORD, PRES.

E. NORTON, SEC

**YAKIMA TRANSFER &
STORAGE CO.**

Office and general storage warehouse No. 25 North Front, directly opposite Northern Pacific passenger station.

22,000 square feet of compartment storage for household goods, pianos etc.

Track warehouse No. 11 South First Ave, 30,000 square feet of floor space devoted exclusively to the storage of merchandise. Every facility for clean, economical, storage and handling of commercial accounts.

Auto trucks and teams.

A Well Informed Employee Is Your Greatest Asset

TO GIVE the service that your customers expect and are entitled to receive, it is essential that every department head in your organization have an intimate knowledge of modern warehousing.

This knowledge can best be imparted to the various men in your organization by having them read DISTRIBUTION & WAREHOUSING each month.

On the subscription list of DISTRIBUTION & WAREHOUSING are many prominent terminal, warehouse, manufacturing and transportation companies who receive regularly several copies of each issue for their general executives, traffic managers and other department heads.

The subscription price is only \$2.00 per year (\$2.50 west of the Mississippi). Dictate the letter now, giving us the names and addresses of the men in your company who should be receiving this publication each month.

**DISTRIBUTION &
WAREHOUSING**

239 West 39th St., New York, N. Y.



Copyright 1920, by The Goodyear Tire & Rubber Co.

Trucks Earn More Money on Goodyear Pneumatics

"During January, 1918, we changed over from solids to Goodyear Cord Tires on one of our heavier type trucks. These tires gave us 15,000 miles, when we sent them back and had them retreaded. Since the retread, we have had approximately 10,000 miles of service, and they are still in use. Our mechanical repair bills are much less, therefore the trucks are in service more, giving us a greater earning power than during the period when we were using solid tire truck equipment."—W. W. Koller, Manager, Gordon Fireproof Warehouse & Van Co., Omaha, Neb.

EQUIPPING trucks with Goodyear Cord Tires usually results in savings that equal and frequently exceed those indicated above.


In doing transfer work, particularly over soft country roads or over slippery city streets, these tires have proved able in giving traction.

They have proved equally able in lowering truck repair costs and in permitting trucks to maintain uniform speeds without injury.

And in another essential quality, that of long wear, the sturdy correctness of Goodyear Cord construction protects our good name.

Users invariably find that their trucks on Goodyear Cord pneumatics do more hauling, do it better, do it cheaper, than when on solid tires.

Additional information indicating the economies and results secured with these tires can be obtained by writing to The Goodyear Tire & Rubber Company, at Akron, Ohio.

GOODYEAR

CORD TIRES

Built with a system of side vents and a volume of rubber greater than that of any other truck tire, Kelly Caterpillar Tires save the truck from destructive road shocks.

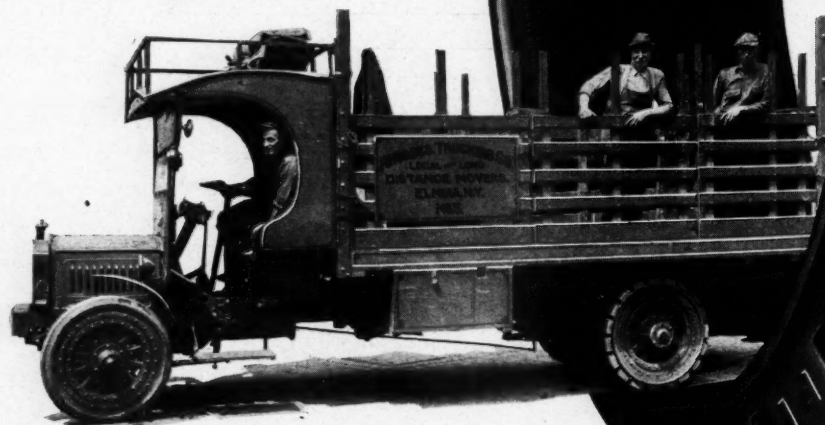
Not only do Caterpillars save the truck, but they also save themselves. The notches or side vents allow each segment of rubber to expand quickly as it comes in contact with the road. The traction wave is broken every few inches, eliminating the dangers of overheating and base separation.

The side vents also enable the tire to get greater traction. The Caterpillar grips the road without slipping and carries the truck easily over roads where other tires are helpless without chains. This increased traction means more power with less gasoline and oil consumption.

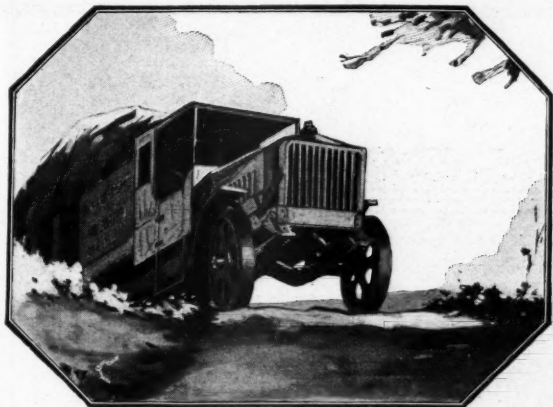
Thousands of fleet-owners are using Kelly Caterpillars to save their trucks and to cut down tire costs.

Kelly-Springfield Tire Co.

New York, N. Y.



KELLY SPRINGFIELD **TRUCK TIRES**



A Stronger, Better Truck for Warehousemen

TIME was when motor trucks were sold largely on price. Users, still skeptical of the service value, economy and utility of motor haulage, were willing to experiment—but only upon as modest an investment as possible.

Today the cheap truck has had its fling. Its function has been fulfilled. It has convinced hundreds of thousands that the motor truck has unlimited possibilities for more economical transportation.

Now the demand is for a *better* truck—a truck of greater endurance, longer life and a resultant lower upkeep cost.

Reliable service, low maintenance cost, long truck life—all the elements of satisfactory

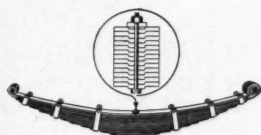
and economical truck operation—depend largely upon the builder's knowledge of the strains put upon a truck under severe working conditions; depend upon his ability and desire to provide enough strength to guard against break-downs.

Strength without excessive weight is the most important factor and it can only be secured by quality, balance, and careful workmanship. A stronger truck is a better truck. *And such is the new Jumbo.*

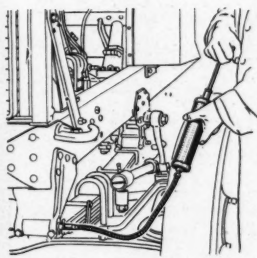
Write for full information

NELSON MOTOR TRUCK COMPANY, Saginaw, Michigan

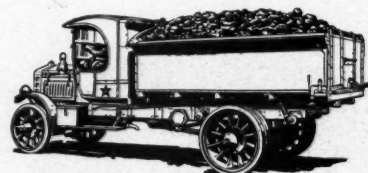
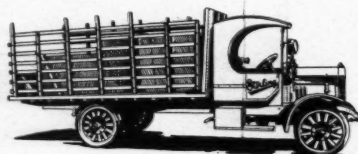
JUMBO



Chrome vanadium steel springs, extra long, heavy stock, cupped at center to prevent shippage.



Alemite Pressure Lubricator. The driver simply slips the coupling over a convenient nipple and gives a half turn on the compressor handle. Pressure of 500 pounds forces out dead dried grease and supplies fresh lubricant to every part of the tightest bearing. No grease touches the hands.



NO matter what your business may be, if you have real hauling to do, there's a Sterling of the right capacity, speed and body equipment to handle it efficiently and economically.

**"Efficiency
on
Wheels"**

Sterling

**MOTOR
TRUCKS**

are built in 1½, 2½, 3½ and 5-ton capacities, Worm-Driven, and in 5 and 7½-ton capacities, Chain-Driven.

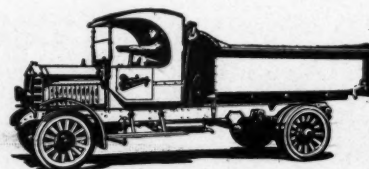
The 1½ and 2½-ton Sterlings, when equipped with Pneumatic Tires, will carry loads anywhere that a passenger car may be driven.

The 5-ton Chain-Driven Sterling—"The Road-BUILDER"—and the 7½-ton Chain-Driven Super-Sterling—"The Inter-City Freighter"—meet in an exceptional way the requirements of those who demand dependable service under extremely trying conditions.

Better Trucks than the Sterlings are not built anywhere.

Sterling Motor Truck Company, Milwaukee

Builders of Motor Trucks exclusively for twelve years.





The Maxwell Job

An exterior and interior view of one of three buildings furnished to the Maxwell Company, who wanted good storage buildings in a hurry—and got them.



With plant expansion forced upon them, the Maxwell Company was obliged to make quick provisions for warehousing facilities to take care of the ever-increasing flow of automobiles and automobile parts.

Blaw-Knox Prudential Steel Buildings (Standardized Sectional) met the emergency—we furnished quickly exactly the buildings they needed, and the simplicity of erection saved the day for Maxwell. And they're not temporary buildings—but put up to stay.

Blaw-Knox Prudential Steel Buildings are furnished in single span widths from 8 to 50 feet, and in any required length.

Buildings 20, 30, 40 and 50 feet in width are carried in stock ready for immediate shipment.

Write for further particulars and prices.

Note.—These products are built and trade-marked by
Blaw-Knox Company; Steel Forms for Concrete Construction—Clamshell Buckets—Fabricated Steel Specialties—
Water Cooled Appliances for High Temperature Furnaces—
—Pressed, Riveted and Welded Plate Work—
Standardized Sectional Steel Buildings.

BLAW KNOX

PITTSBURGH, PA. COMPANY NEW YORK · BOSTON · CHICAGO
631 Farmers Bank Bldg. DETROIT · SAN FRANCISCO

CONCRETE

for Mercantile and Industrial Buildings Means —

C You'll be interested in our new booklet "Mercantile and Industrial Buildings of Concrete." Just ask our nearest District Office to send you a copy.

- C** Fireproof, permanent, vibrationless, practically maintenance-free structures.
- C** Greater load carrying capacity and reserve strength.
- C** Speed of construction and uninterrupted construction, regardless of season.
- C** Well lighted, clean and healthful surroundings —helping to make contented workers, who speed up production.
- C** First cost is practically the only cost.
- C** Low insurance cost.

PORTLAND CEMENT ASSOCIATION

OFFICES AT

ATLANTA
CHICAGO
DALLAS
DENVER
DES MOINES
DETROIT
HELENA

INDIANAPOLIS
KANSAS CITY
LOS ANGELES
MILWAUKEE
MINNEAPOLIS
NEW YORK
PARKERSBURG

PITTSBURGH
PORTLAND, OREG.
SALT LAKE CITY
SAN FRANCISCO
SEATTLE
ST. LOUIS
WASHINGTON

Muscle or Machinery?

Which method in these times of high labor costs are you using to secure greater production in your plant, mill or factory?

Today the hand-trucker is as obsolete as the horse-drawn street-car. In practically every industry, at steamship and railroad terminals, materials are moved quickly and cheaply by

Trucks, Tractors and Locomotives

equipped with

Edison Storage Batteries

In any service you can depend on Edison-equipped Trucks, Tractors and Locomotives to stand up under the hardest work.

The all *steel* and *iron* construction and the *alkaline* solution of the Edison is a sure guarantee of the greatest number of work days from your equipment.

Do you want maximum efficiency with lowest cost? Let us show you what Edison-equipped Trucks, Tractors and Locomotives will do for you. Write for Bulletin 600-B TODAY.

Edison Storage Battery Co.

Factory and Main Office: Orange, N. J.

DISTRIBUTORS IN

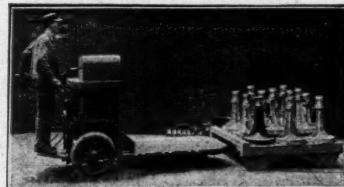
New York, Boston, Chicago, Detroit, Cleveland, Seattle, San Francisco, Denver, Kansas City
New Orleans, Atlanta, Washington, Philadelphia, Pittsburgh, St. Louis, Scranton, Syracuse
New Haven, Los Angeles



The storage battery tractor does the work of many hand-truckers, and does it quicker, better and cheaper. It is speedy, efficient, tireless.



Old-time methods of handling, by men and animals, are being replaced by storage battery locomotives.



The elevating platform truck picks up its load and departs. Indispensable for rapid handling of pieces in quantity production.



GIVE HIM A CHANCE

You can't expect your profits to rise and shine with Old Man Repairs and Old Boy Refinishing sitting tight on the job.

Repairs? Refinishing? There ought not to be any such words in your business vocabulary.

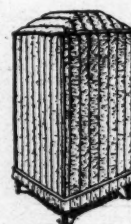
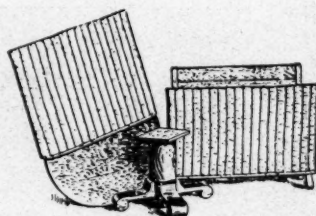
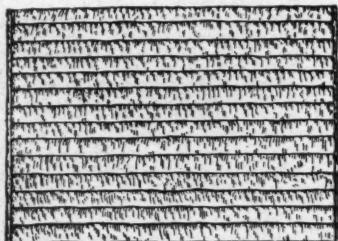
Repairs and refinishing are like rats in a warehouse—they eat into your profits before you realize it.

Drive 'em out! Join the Loupilco League for Better Furniture Moving and watch your profits take a boom!

Use Loupilco Furniture Pads (soft, resilient, durable) in moving all your furniture and before you know it your Receiving Teller will think you've struck oil sure-nuff.

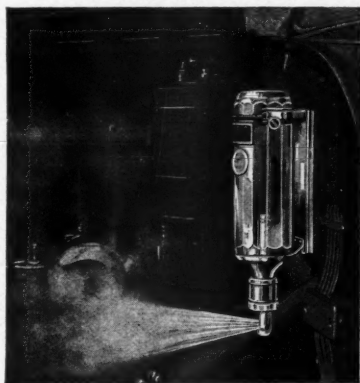
LOUISVILLE BEDDING COMPANY
Incorporated

OWNERS OF LOUISVILLE PILLOW COMPANY
Louisville, Kentucky

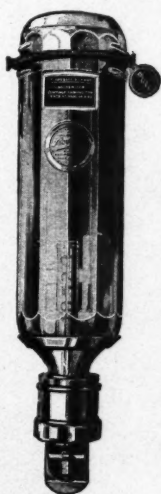


The New BOYCE FIRE EXTINGUISHER

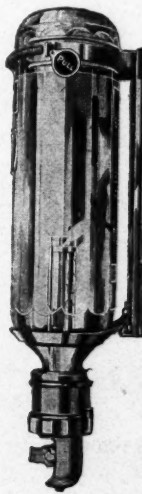
A combined automatic and hand
operated fire-fighting instrument



A new and automatic method of
preventing fires



Front View
Showing
Handsome
Appearance



Side View
Showing
Bracket

THE new Boyce Automatic Fire Extinguisher is a revolutionary method of preventing gasoline fires that will instantly appeal to every shipper or warehouse man. Installed under the hood of a motor truck or motor car (where 95% of such fires originate), a fire can never become serious.

By creating the heat that sets the Boyce Automatic in operation, a blaze destroys itself. A fire is no sooner started than the automatic fuse melts off and a fan-shaped torrent of chemical is sprayed over the entire motor. In 15 seconds the fire is out. (An overheated motor cannot melt the fuse—only an actual blaze will put the instrument into operation.) In case of fire in any other part of the car or truck, the Boyce can be easily slipped from its bracket and operated by hand. It is the only combined automatic sprinkler system and hand operated extinguisher on the market.

Installed in a warehouse, it forms an efficient fire-fighter, a portable

chemical sprinkler system, ready to do the job unaided, if no one is on hand to operate it. A tireless guardian of the most valuable property. The container being of glass, the fluid is always visible, and there is no danger of being caught with an empty container, as in the metal type of extinguisher. The chemical is effervescent, pure, colorless, a non-conductor of electricity, will not freeze in the coldest warehouse, and is absolutely harmless to the finest fabrics.

In the storage warehouse where a fire is liable to gain headway long before it is discovered—the automatic feature is most fully appreciated.

PRICES

Model 1

(pint size) \$6.00

West of the Rockies..... 6.50
Canada 8.25

Model 2

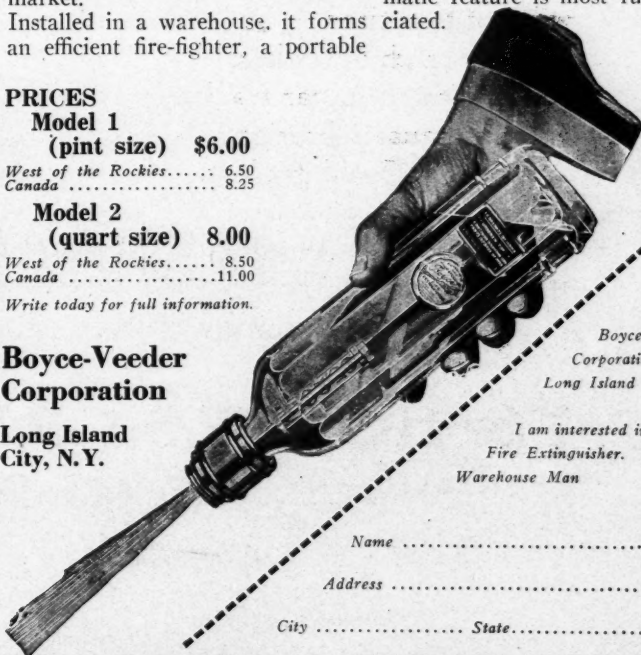
(quart size) 8.00

West of the Rockies..... 8.50
Canada 11.00

Write today for full information.

**Boyce-Veeder
Corporation**

**Long Island
City, N. Y.**



Boyce-Veeder
Corporation,
Long Island City, N. Y.

I am interested in the new Boyce
Fire Extinguisher. I am a Shipper
Warehouse Man

Name

Address

City State

The Economy of Chains

EVERY time a truck wheel slips and skids about in mud or sand; every time it gets stuck in bad going it's wasting money—in time, tires and fuel.

Every loss of tractive effort is traceable to smooth wheels on slippery surfaces—and is cutting down gas mileage and tire mileage.

In service the Holmes Tire Grip for either single or dual tires will quickly repay its cost—in time, tire and gas savings alone.

HOLMES

TIRE GRIP—

will not tear tires.
will not catch in brakes.
will not catch in car tracks.
will not cause vibration.
cannot fly off and get lost.

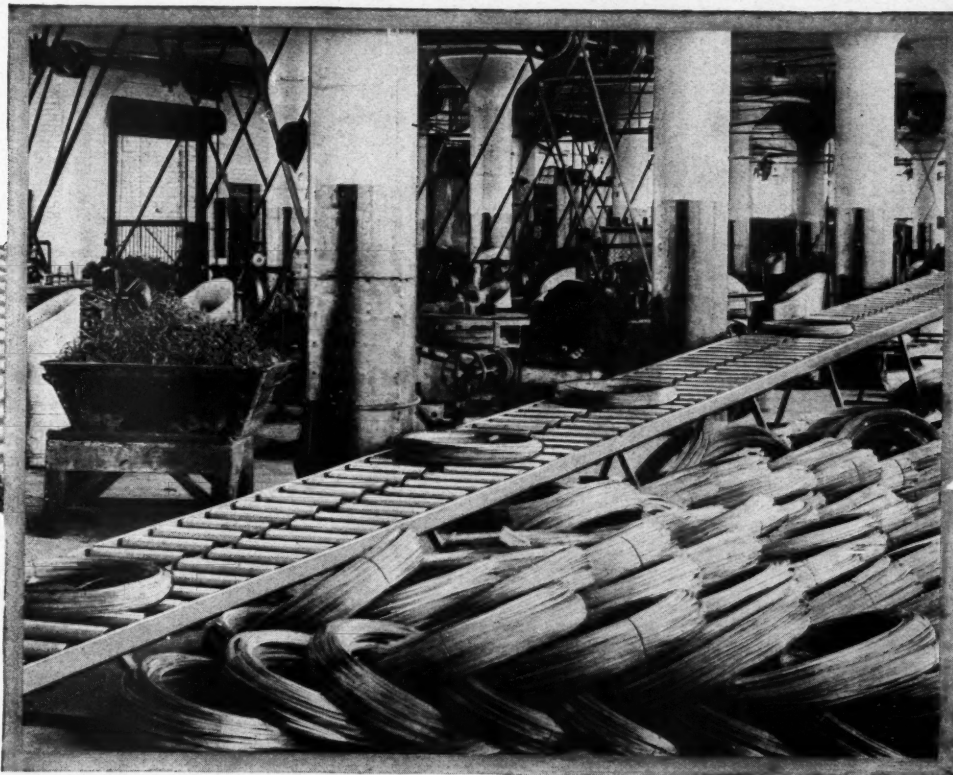
Keeping trucks going is the secret of economical operation—HOLMES GRIPS keep them going.

Write us if your dealer can't supply you.

The HOLMES GRIP CO.

Shelton

Connecticut



EVERY pair of hands and legs you relieve from lugging, wheeling or hauling things from place to place immediately becomes available for more productive work.

And when you do that costs start to drop, output increases, overhead takes a favorable turn—downward.

The Mathews steel ball-bearing roller Conveyor not only takes the place of human labor, but it entails no expense for power. Gravity operates it!

Utility: The Mathews can be adapted to practically any manu-

facturing business, plant or yard layout; to carry heavy or light work—over, under or around obstacles, or straightaway. Portable or permanent installation. No upkeep worth mentioning; doesn't go on strikes; demands no pay envelope; creates no power bills!

Our engineers' suggestions as to how and where the Mathews can be made profitable to *you* cost nothing. Write.

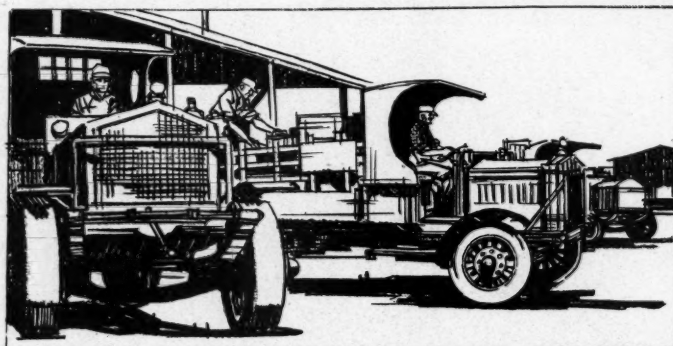
Mathews Gravity Carrier Co.
134 Tenth Street, Ellwood City, Pa.

Branch Factories:

Port Hope, Ontario

London, England

MATHEWS
SPEED ECONOMY
GRAVITY ROLLER CONVEYER



Why take chances on just "insurance" when—

Any agent or broker can get you a NORTH AMERICA AUTOMOBILE POLICY? It costs no more than ordinary insurance, and it guarantees maximum safety with the broadest possible protection.

The Insurance Company of North America was founded in 1792 in Independence Hall, Philadelphia, where the Declaration of Independence was signed. It is the oldest American stock insurance company and the first American Company to transact international business.

The North America, for 128 years, has paid every obligation with the utmost promptness. It has survived every great war and national disaster—emerging from each experience stronger financially than before.

Whether you have one truck or a hundred trucks, proper and adequate insurance is essential. Why not insure with a company of such established reputation and valuable experience as the North America? The North America policies cover FIRE, THEFT, COLLISION and PROPERTY DAMAGE.

The BEST insurance in the long run is less expensive than the CHEAPEST.

Check off on the coupon below the form of protection you need and mail to-day. We will send you data.

Insurance Company of North America Philadelphia

Capital \$4,000,000. Founded 1792

Writers of FIRE, MARINE, BAGGAGE, PARCEL POST, etc.



INSURANCE COMPANY OF NORTH AMERICA
232 Walnut St., Philadelphia.

Without obligating me in any way, send me full information as to automobile insurance covering the hazards I have checked off.

Name

Address

Number of Trucks

- ☐ Fire
- ☐ Theft
- ☐ Collision
- ☐ Property Damage

DUPLEX TRUCKS

BUILT FOR BUSINESS



Why The Duplex Limited Is Winning Enthusiastic Approval All Over America

WITHOUT question the remarkable success of the Duplex Limited is due to the confidence that truck users all over America have in the Duplex Truck Company as builders of trucks that a business man can consider an investment in practical trucking efficiency.

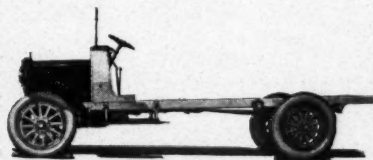
What does the steady, persistent growth of the Duplex Truck Company signify as regards this Duplex Limited?

For one thing it means that the Limited is designed and built by a company that is known to be successful—a company that is famous for building good trucks.

Medium Capacity—Two Wheel Drive—Complete Electrical Equipment—Pneumatic Tired—High Speed—it is a wonderful truck for general business hauling.

4 Cylinder, enclosed type motor—water cooled—cast enbloc—Bore 4". Stroke $5\frac{1}{4}$ ". 3 Point Suspension. Pneumatic Cord tires. 145" Wheel Base. Electric Lighting and Starting. Equipped with Windshield, Ammeter, Boyce Motometer, Speedometer, Electric Horn, Tools, Jacks, Rim Wrench, Front Fenders, Alomite High Pressure Lubricating System, Driver's Seat without extra charge.

Find out for yourself why the Duplex Limited already is known as a very safe investment for a business man.



Low Operating Costs of The Duplex 4-Wheel Drive Steadily Increases the Volume of Duplex Users.

IT is a fact that ability to do the unusual often sells the Duplex 4-Wheel-Drive the first time.

But you will find that the second and third truck is usually sold on a basis of steady performance at low operating cost.

True, Duplex enthusiasts have come to regard the spectacular as an every-day task for the Duplex 4-Wheel-Drive.

But it is even more gratifying to learn that Duplex owners are even more enthusiastic about the in-and-out daily dependability and economy of Duplex over all kinds of roads and in all kinds of weather.

The very fact that the Duplex has a surplus of power in extra-

ordinary hauling, is the very reason why the Duplex cost per ton mile is lower over good roads as well as bad roads—over city streets as well as over country highways.

We have no reason to quarrel with the fact that the economical performance often sells a Duplex truck. But we take special pride in the fact that the second, third and fourth Duplex are bought because the user *knows* the lower cost and lesser depreciation of the Duplex 4-Wheel-Drive.

Ask the nearest Duplex dealer why the Duplex 4-Wheel-Drive repeats so often. He won't have to go behind the facts. They speak for Duplex better than he can.

Duplex Truck Company

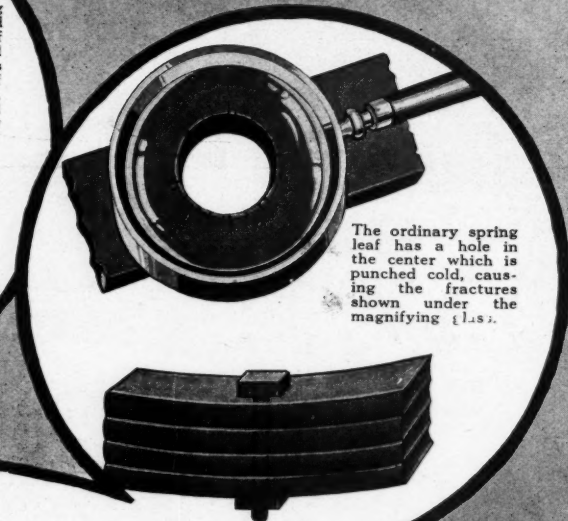
Lansing • Michigan

One of the Oldest and Most Successful Truck Companies in America

Why the Harvey is Practically Unbreakable — and Why Most Springs Break



The Harvey Spring is boltless. Instead of a hole, each leaf has a bead forged hot. This bead fits into the cavity of the leaf below it. The leaves are held firmly in place by clips.



The ordinary spring leaf has a hole in the center which is punched cold, causing the fractures shown under the magnifying glass.

THE Harvey Boltless Spring has *no weak spots*. It is just as strong at the center as it is anywhere else. No metal has been removed at the center, no fractures made—the fibre of the steel is unbroken.

This feature, with that of the special Harvey process of heat treating and tempering each leaf accurately and uniformly, gives the Harvey Spring unsurpassed strength and resilience.

The ordinary spring has a weak spot where the hole is punched to accommodate a bolt. Such a spring needs but a little added strain to induce one of the minute fractures starting at the hole to extend and enlarge to the full width of the leaf.

Users of Harvey Springs are amply protected. Every Harvey Spring is guaranteed against breakage or sagging.

Write us for full information regarding Harvey Truck Springs and the name of the nearest Harvey dealer.

Harvey Spring & Forging Co.
1124 17th St. Racine, Wis.

Easy
Riding
Guaranteed



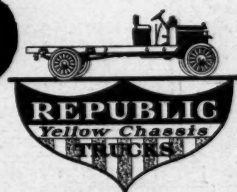
**BOLTLESS
AUTOMOBILE
SPRINGS**

What is the net experience of more than 60,000 users of Republic Trucks? Simply this:—The Republic stands up better under the hardest kind of hauling. Owners say their experience shows that Republic *performance* is unequalled. Their cost sheets prove a greater *ruggedness* and *economy*. That is why they add more Republic Trucks as their haulage needs increase. That is why the Company, in seven years, has built and sold more than 60,000 Republic Trucks.

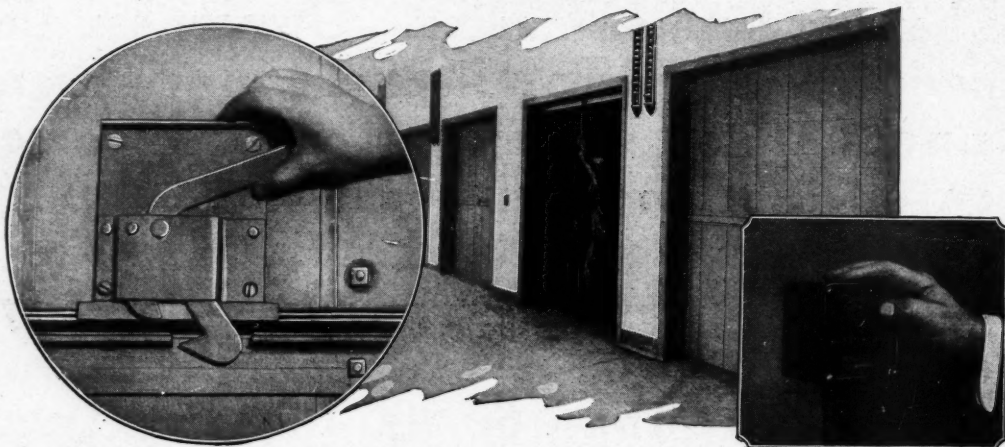


REPUBLIC TRUCKS

Republic Motor Truck Co. Inc., 948 Michigan Ave., Alma, Mich.



Put your
Elevator Door Problems
up to Peelle



PEELLE

COUNTER-BALANCED TRUCKABLE

FREIGHT ELEVATOR DOORS

As Easy to Operate as they are Efficient!

PEELE Counterbalanced Truckable Freight Elevator Doors are so finely balanced, without the use of counterweights, that they respond quickly to the smallest effort of the elevator operator where manually operated, while the electrically operated doors are opened or closed by pushing a button.

There is no grating, no difficult opening and closing due to lateral movement—because PEELE Doors operate vertically, gliding lightly on the inside of the hatch.

The manifold superiorities of PEELE Doors make them inevitable where efficient service, safety and economy are required. Let us demonstrate to you what PEELE Doors have done for others, and what they can do for you.

*Beware of imitations named "Peelle Type," "Peelle Style," etc
PEELLE Engineers are at your service, without any obligation on your part. Send for catalogue of PEELE Products.*

**Judge PEELE
Products by their
Users:**

Neal Fireproof Storage
Bingham Warehouse
J. W. Packard Warehouse
Fireproof Storage Co.
E. E. Leach Warehouse
Stevenson Storage Bldg.
Enterprise Storage Warehouse
Crane Co.'s Warehouse
Merchant Cold Storage

*and many
others*

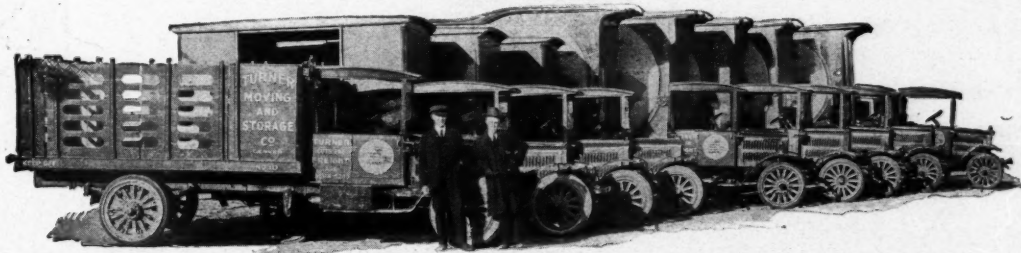
THE PEELE COMPANY

CHICAGO
CLEVELAND
BOSTON
PHILADELPHIA

Stewart Avenue and Harrison Place
BROOKLYN - NEW YORK

CANADA:
MONTREAL
TORONTO
WINNIPEG

Peelle Products Protect



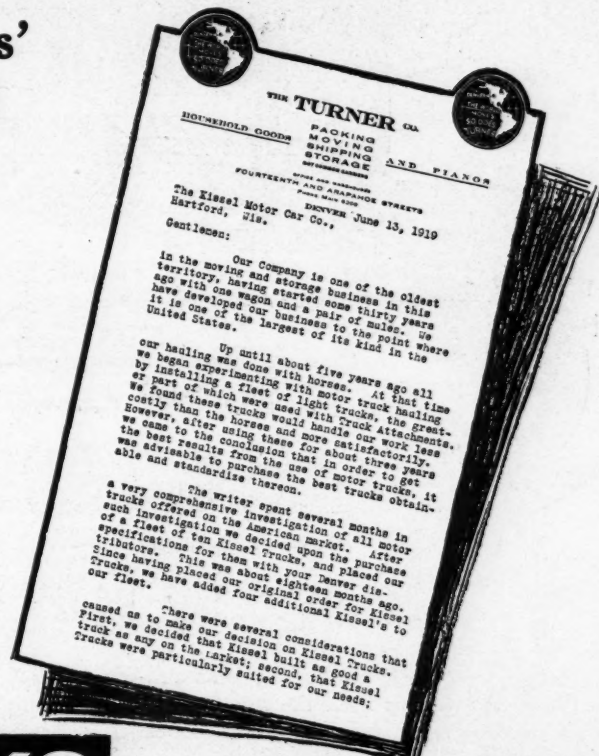
Part of Kissel fleet owned by Turner Moving & Storage Co.

"After several months' investigation of all motor trucks—we purchased Kissels"

"After this investigation we decided upon the purchase of a fleet of ten Kissel Trucks, and placed our specifications for them with your distributor," adds Mr. Turner, President, Turner Moving & Storage Co.

"This was about eighteen months ago. Since then we have added about four additional Kissels to our fleet."

What the Turner investigation brought to light—why he invested in Kissel Trucks—are facts you, no matter what business you are in, will find very interesting. They are told in the—



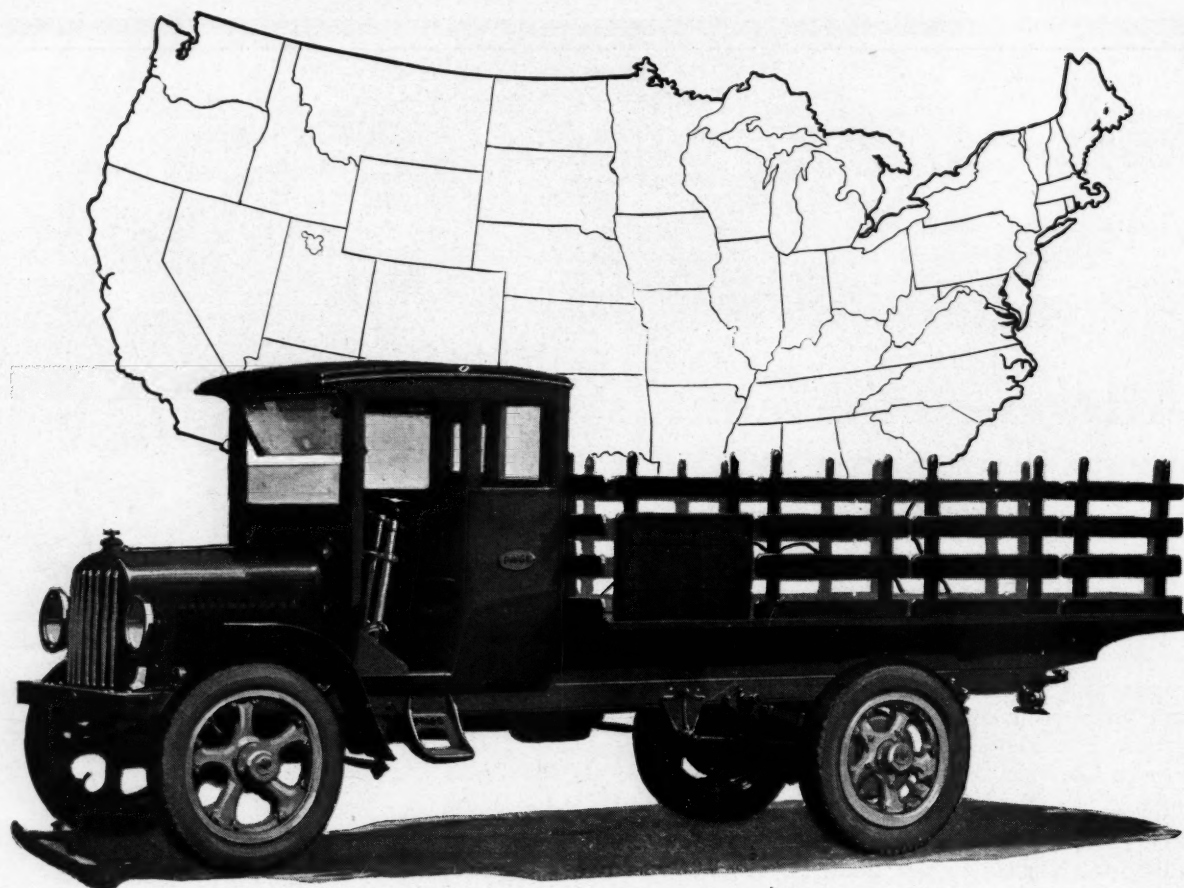
KISSEL TRUCKS

Performance Proof Folder No. 3

Send for it—it's free to business executives, purchasing managers, present or prospective truck owners, who write on their business letterhead. In addition we will send you other Kissel Truck Performance folders containing facts, and statements by owners of Kissel Trucks in all parts of the country and in different lines of business.



Kissel Motor Car Co., Hartford, Wis., U.S.A.



Backed by Nation-Wide Service

We can safely predict that our new one-and-one-half-ton Paige will win for itself the same measure of approval that has been enjoyed by all other products in the great Paige line.

For this latest model will have behind it the same factors that have made for the success of its companions in the Paige truck family—thorough mechanical excellence, supplemented by a nation-wide service organization the sole purpose of which is to maintain that original excellence day in and day out.

As the owner of this new Paige, therefore, you will have not only the satisfaction of possessing a truck that is strongly and excellently built, but also the comforting assurance that, wherever you may drive, you will always be within a zone of Paige service, should mishap occur.

The reputation of Paige as an institution of ten years' standing is inseparably connected with every truck bearing the Paige nameplate. With so much at stake, we naturally see to it that every Paige truck makes good even beyond the expectations of the purchaser.

PAIGE-DETROIT MOTOR CAR COMPANY, DETROIT, *Michigan*

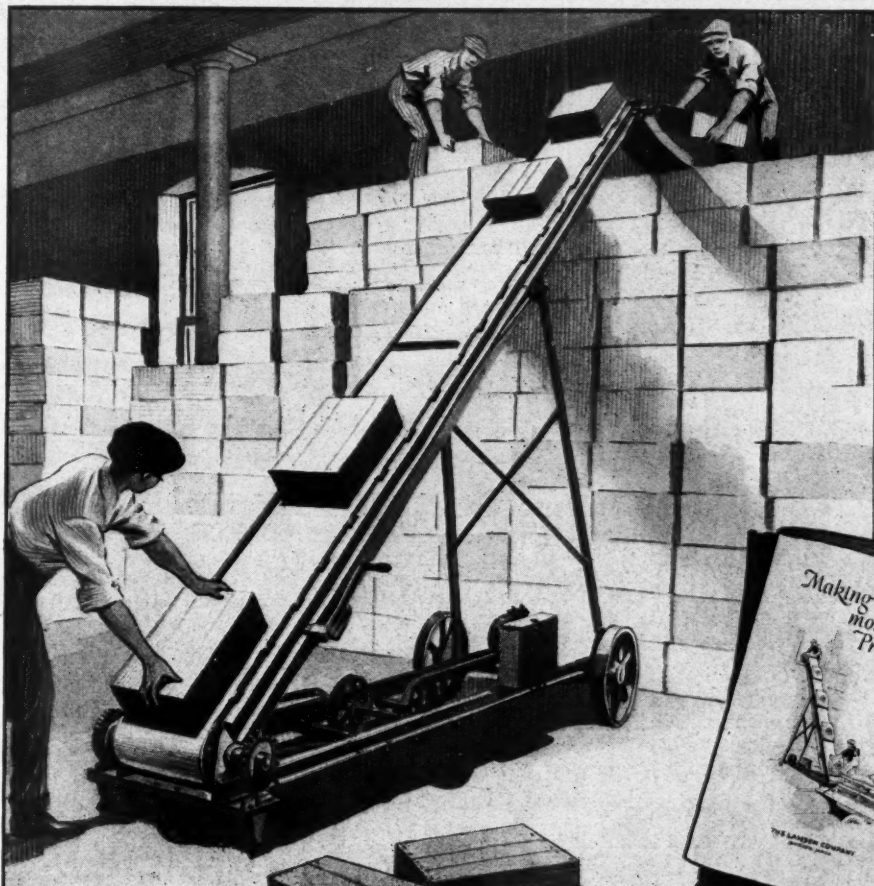
Manufacturers of Paige Motor Cars and Motor Trucks

PAIGE

The Most Serviceable Truck in America

MOTOR TRUCKS

Lamson Conveyors



A New Book on a New Conveyor

THE booklet illustrated above describes a new Lamson product, a portable unit conveyor, designed for loading, unloading, piling and carrying packages, products, and loose materials indoors and out.

There are two types, level and inclined. The inclined conveyor or piler is adjustable as to height, so that when used for piling packages in storage, it always delivers to the top of the pile.

Both types handle boxes, bags and other products, or they are supplied with trough rolls to carry coal, sand, and similar materials.

They are indispensable for piling goods in warehouses and storerooms, for loading and unloading cars and trucks. For temporary purposes, on construction jobs, as a booster for a gravity conveyor, for a thousand and one conveyor jobs in and about the warehouse and factory, these handy portable Lamson units simplify and speed up carrying work in and out of doors, and save their cost many times over.

The booklet shows many applications of the new conveyors. Pin the coupon on your letterhead and send it in; the booklet will come by return mail.

THE LAMSON COMPANY

100 BOYLSTON ST., BOSTON, MASS.

Branches and Service Stations

Boston . . . 100 Boylston St.	Rochester . . . 194 East Main St.	Cincinnati . . . 119 East 5th St.	St. Louis . . . 709 Pine St.
New York . . . 11 E. 37th St.	Detroit . . . 97 Woodward Ave.	Chicago . . . 6 Mo. Michigan Ave.	Valparaiso . . . 908 1/2 Elm St.
Philadelphia . . . 211 N. Broad St.	Cleveland . . . 2063 East 4th St.	Omaha . . . 418 McCargue Bldg.	Seattle . . . 215 Stewart St.
Pittsburgh . . . 9 Third Ave.	Indianapolis . . . Cor. Washington and Illinois	Minneapolis . . . 320 Tribune Annex	Washington, D.C. . . 426 Colorado Bldg.
Baltimore . . . Equitable Building	Los Angeles . . . 221 San Fernando Bldg.	San Francisco . . . 617 Mission St.	Atlanta . . . 30 Moore Bldg.
Toronto . . . 196 Simcoe St.		Vancouver, B.C. . . 603 Hastings St.	

Additional Service Stations

New Orleans, 124 St. Charles St.	Albany, 22 So. Pearl St.	Buffalo, 194 Main St.	Kansas City, 210 New Ridge Bldg.
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THE LAMSON COMPANY,
100 Boylston Street, Boston, Mass.

Gentlemen:

Please send me your new booklet, "Making Labor More Productive."

Name.....

Address.....

Business.....



The Piggly Wiggly Stores "All Over the World" Use Highway Trailers

Treble Truck Earnings With Highway Trailers

*Standard Model Accepted Without Modification by the U. S. Government
Absolutely Safe—Can't Sidewhip or Sway*

You can cut your haulage costs 80% to 90% with Highway Trailers.

You can save from \$10 to \$20 a day in the operation of a single Highway Trailer.

You can make that saving day after day and multiply it, in direct proportion to the number of units you use.

You can profitably follow the example of such great users of transportation as the Timken-Detroit Axle Co., the Cadillac Motor Car Co., and scores of other important businesses.

They are not content to use only 33 per cent of their truck's power and usefulness.

Can you afford to leave two-thirds of your truck's utility idle? Is it good business to make three expensive trips, where one trip will move the load with Highway Trailers?

There is a size and type for every need from one to ten tons capacity.

Investigate this big money-saving method of transportation. Its economy, speed and labor-saving practicability will convince you.

*Note the Price Advantage of
Highway Trailers*

1½ Ton \$ 725

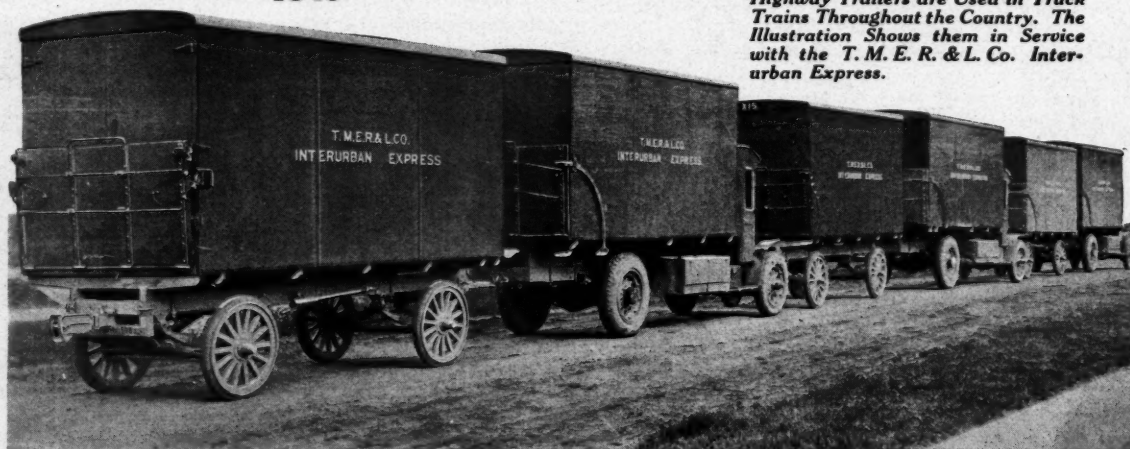
2½ Ton 935

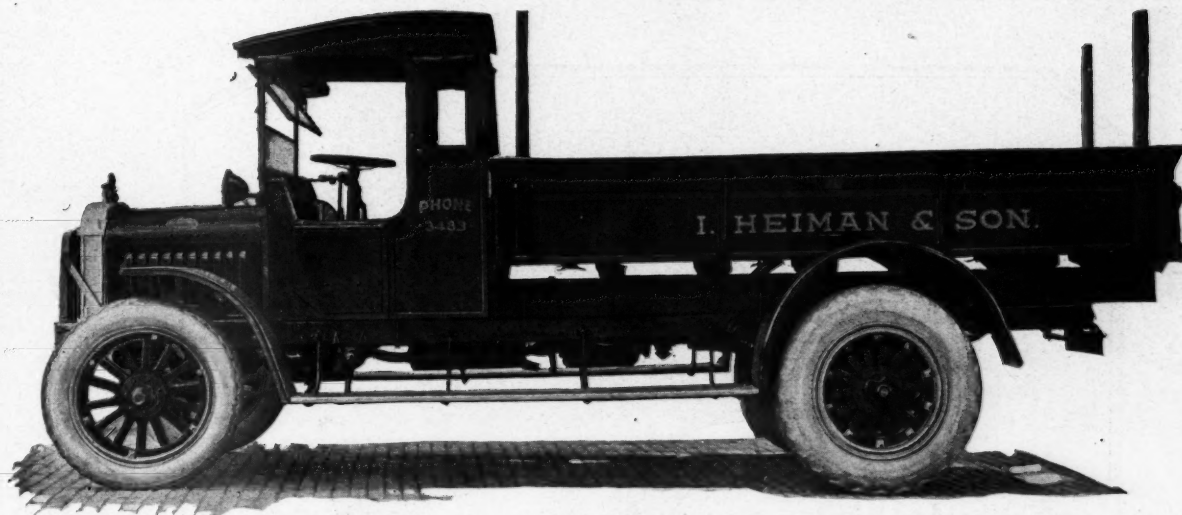
4 Ton 1225

6 Ton 1545

HIGHWAY EDGERTON WISCONSIN TRAILER

*Highway Trailers are Used in Truck
Trains Throughout the Country. The
Illustration Shows them in Service
with the T. M. E. R. & L. Co. Inter-
urban Express.*





GRAMM-BERNSTEIN TRUCKS

To many a business man and truck-owner, the Grammm-Bernstein records of longer life at lower cost, doubtless *do* seem remarkable.

Yet they are not remarkable at all, when you stop to consider the truck itself.

The fact that Grammm-Bernstein is a *better* truck, that lasts *longer* and does *better* work at *lower* cost, is simply clear, cold logic.

For that is exactly what it is built to do.

It is built conscientiously. It is built carefully.

It is built of the best materials we can find, with the best engineering we can bring to bear.

Not best because we think so or say so. But because 20 years of truck-building have proved them so.

Is it strange, then, that the Grammm-Bernstein should excel in long life and downright economy?

Or that our owners, ninety-nine times out of a hundred, add Grammm-Bernstein when they need another truck?

Our dealer is prepared to lay before you Grammm-Bernstein figures which will help you to choose a truck to your own good advantage.

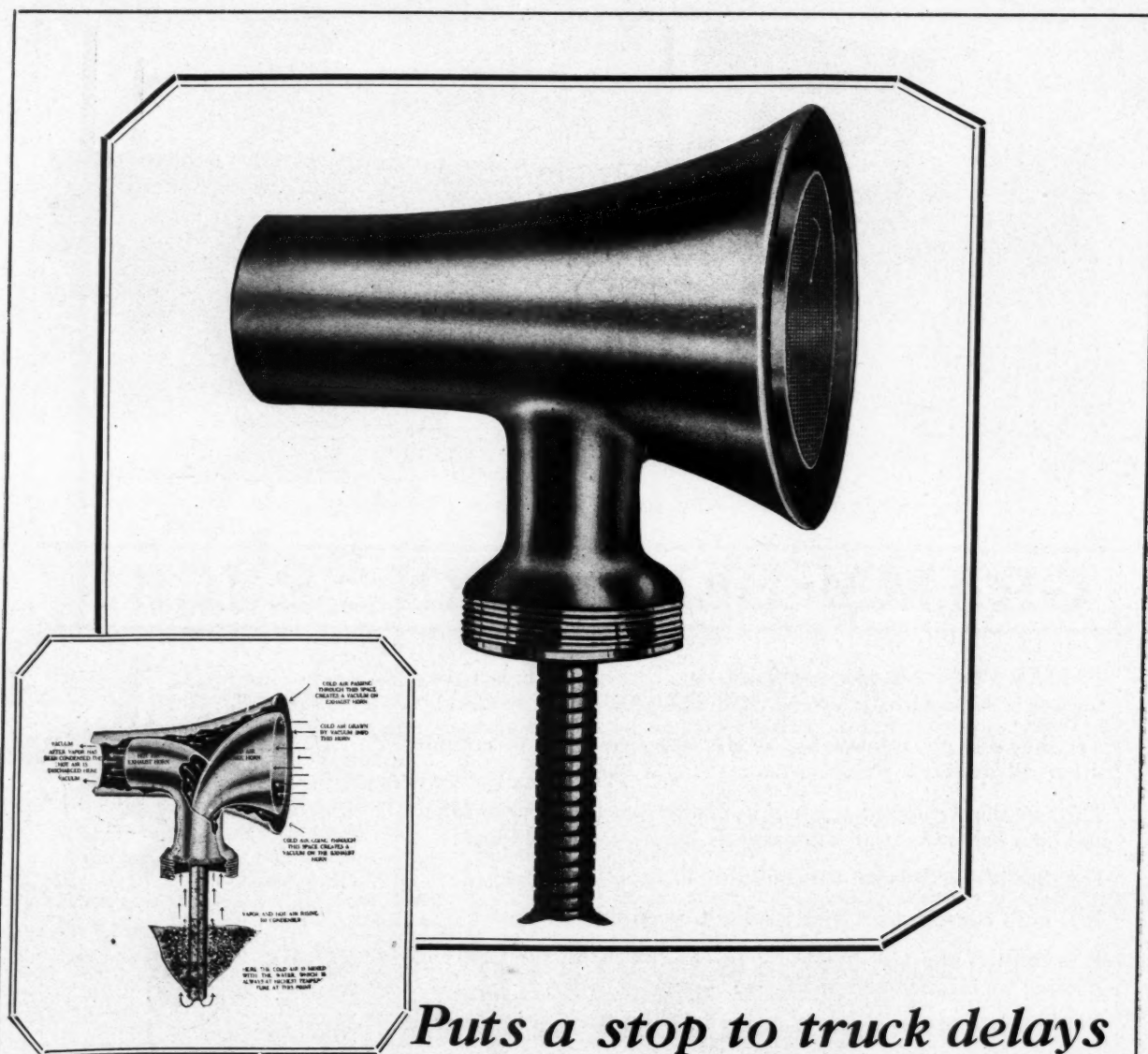
It will pay you to learn about Grammm-Bernstein standard equipment, which is worth \$500 to \$550, and is included in the cost price of our worm-drive models.

All Grammm-Bernstein Transmissions are trouble-proof and are provided with a pad for attaching Grammm's Basic Patent Power Take-off. Dealers and truck owners should assure themselves that any trucks purchased with power take-off do not infringe B. A. Grammm's Basic Patent No. 1194994



The Grammm-Bernstein Motor Truck Co., Lima, Ohio

Pioneers Since 1901—Builders of the First Liberty (U. S. A.) Truck



Puts a stop to truck delays

Every day truck delays are costing you lost minutes and money. Little mechanical breakdowns—stops for adjustments—but most time is lost waiting for overheated motors to cool.

Keeping radiators from boiling—motors cool on any run means capping the radiator of the truck or car with a Vacuum Air Cooler.

It draws cold air into the radiator—sucks out the hot, and condenses the vapor into water for recirculation.

Besides keeping the motor 35° cooler—it warns when water's needed.

Your dealer has the Masco Vacuum Air Cooler and will put this time and money saver on your car or truck for \$6.00. If he does not have it, send us his name and address and we will supply you—write now to

MAYER AUTO SPECIALTY CO.
453 Ellicott Square, Buffalo, New York

Masco Vacuum



Air Cooler



General Motors Trucks

WHEN the man who does a general trucking business chooses a motor truck there is vastly more to be considered than just the capacity of truck to meet his requirements.

The things which make a truck dependable must be there—quality built in at the factory.

Through years of strenuous service a motor truck must perform regularly—always on the job—regardless of other qualifications.

In the long run, dependability is the thing which puts GMC Trucks ahead at the climax of the race. GMC Trucks

are the trucks that get there and back when getting there and back is important.

The kind of quality that counts is the kind that is put in at the factory in the way of good materials, common sense engineering and clean-cut workmanship.

Such quality is bound to come forth in the form of satisfactory service over a long period of time.

GMC Trucks are built by the exclusive truck making unit of the General Motors Corporation, the strongest organization in the automotive industry.

GENERAL MOTORS TRUCK COMPANY

PONTIAC, MICH.

Branches and Distributors in principal cities.

(610)



Trailmobile

Trade-Mark Reg. U. S. Patent Office

The Greatest Hauling Economy

The Motorless Motor Truck Thousands in Use

DIVISION No. 1
Light, one-way four-wheeled Trailmobiles for use with passenger cars or light trucks: 1,250 lbs.; $\frac{3}{4}$ ton, and 1 ton.

DIVISION No. 2
Heavy-duty four-wheeled Trailmobiles for use with trucks: $1\frac{1}{2}$ -tons, one-way; 2 tons; $3\frac{1}{2}$ -tons, and 5 tons reversible and one-way.

DIVISION No. 3
Semi-Trailmobiles: $2\frac{1}{2}$ tons; 4 tons; 6 tons, and 10 tons.

DIVISION No. 4
Pole Trailmobiles: $1\frac{1}{2}$, 3, 5 and 7 ton.

dom from trouble and low repair expense.

Write for booklet, "Economy in Hauling"

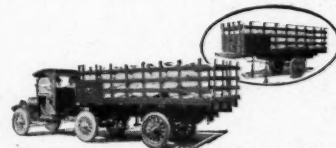
The Trailmobile Co., 515-535 E. Fifth St., Cincinnati, O.

THERE is no business in which hauling is a larger part of the cost of doing business than in warehousing and distribution. There is no business in which the economies made possible by Trailmobiles are more important.

In the great cities scores of firms that operate large fleets of trucks have adopted as standard the short wheel-base truck and semi-trailer; for hauling between towns, between factories the four-wheeled Trailmobile is every day a greater favorite.

There is a sound business reason for that rapidly growing popularity. And that reason is that under proper conditions costs are cut almost in half. The Trailmobile doubles the load that any truck hauls; it adds only about $12\frac{1}{2}$ per cent to operating cost; it enables fewer men to accomplish a greater result.

And Trailmobiles are designed and built as well as the rigid application of the highest standards of motor vehicle engineering permit. They establish a new standard of freedom from trouble and low repair expense.



Semi-Trailmobiles for use with short wheel-base trucks in city hauling are equipped with an exclusive fifth-wheel mechanism which makes coupling automatic. They are made in $2\frac{1}{2}$ ton, 4 ton, 6 ton and 10 ton sizes.



Good roads are preserved by reducing the load carried on each wheel

MAGIC SCRATCH REMOVER



If each of your packers and van men has a Magic Scratch Remover in his pocket, it will save you hundreds of complaints and tons of grief.

It is simple to use and requires no work at all. Just rub over the scratch and it's gone forever.

FREE TRIAL OFFER

Mail this ad with your letter head and we will send you a half dozen postpaid, strictly on approval. See for yourself how quickly they hide scratches, bumps, bruises and mars on any kind of finish.

If the Magic Scratch Removers **make good** send us \$2.60 and they are yours.

On the other hand if you are displeased for any reason whatsoever, return the shipment at our expense and the trial costs you nothing.

You can't lose on this proposition. Take advantage of it **TODAY**.

The M. L. Campbell Co.

708 East 19th St.,

Kansas City, Mo.

Mead-Morrison
Capstan
Winch

MEAD-MORRISON SERVICE

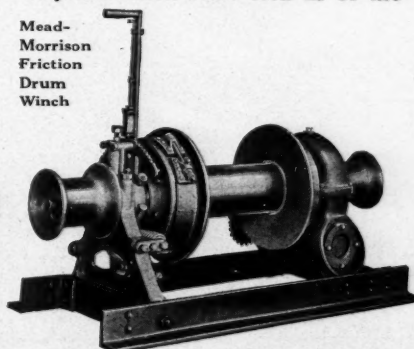
Lifts the Load of Industry

Reducing trucking costs by decreasing idle time in loading and unloading—distinctly an engineering problem. That the Mead-Morrison staff of engineers have so successfully solved this problem is but another demonstration of their ability as specialists in material handling equipment.

MEAD-MORRISON TRUCK WINCHES

Either the Vertical Capstan or Friction Drum type satisfactorily meet every demand of truck users who must economically and speedily handle heavy, bulky loads. Many truckmen have told us of the particular advantages of Mead-Morrison Truck Winches for handling unusual jobs—how they made money under difficult conditions because their trucks were Mead-Morrison equipped.

The Mead-Morrison Motor Truck Winch folder conclusively proves there is a real saving when you "let the engine do the work." Send for one.

Mead-Morrison
Friction
Drum
Winch

MEAD-MORRISON

MANUFACTURING COMPANY



427 Prescott St.

East Boston, Mass.

If It's
Made
of
Canvas
We
Make
It

Quality and Service
is Our Slogan



Write
for
Stock
List
and
Catalog

Waterproof Storm Covers for Auto Trucks, Wagons and Horses, Tarpaulins, Dust Covers, Piano Covers, Victrola Covers, Tents, Horse Feed-Bags, Radiator and Hood Covers, Furniture Loading Pads, Van Liner Pads, Canvas Pads and Bags of every description.

Large Stock—Prompt Deliveries

RICHARDS MFG. CORPORATION,

Philadelphia, Pa.

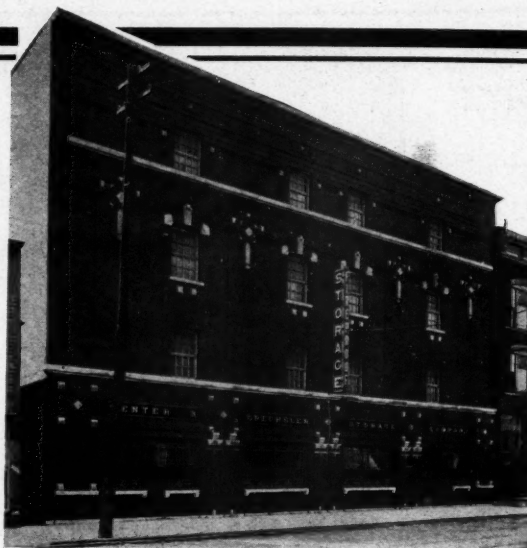
MAIN OFFICE AND FACTORY: 948-952 NORTH 8th STREET

The Advantage of Experience

Our knowledge of the warehousing business coupled with the experience gained by the designing and constructing of more than 25 warehouses for the following list of clients, is your assurance, that you will receive from this organization the utmost in utility and appearance in any warehouse architectural work entrusted to us.

- 3 Warehouses for Hebard Express & Van Co., Chicago.
- 7 Warehouses for Werner Bros. Fireproof Storage Co., Chicago.
- 4 Warehouses for W. C. Reebe & Bros., Chicago.
- 2 Warehouses for Von Sydow Fireproof Warehouse Co. Chicago.
- 3 Warehouses for Iredale Fireproof Warehouse Co., Evanston, Ill.

We have also designed warehouses for:
 Wenter & Drechsler Storage Co., Oak Park, Ill.
 Jackson Express & Van Co., Chicago.
 Siebold-Schaeffer Co., Chicago.
 Nelson & Westerborg Storage Co., Chicago.
 John E. Huffmeyer, Chicago.
 Westfall Storage & Van Co., Chicago.
 Miller's Buena Park Express, Chicago.



WENTER & DRECHSLER STORAGE CO.
WAREHOUSE—OAK PARK, ILL.

Before you plan that new warehouse investigate the kind of service we have to offer.

GEO. S. KINGSLEY

ARCHITECT

109 N. Dearborn St.,

Chicago, Ill.

A Well Informed Employee Is Your Greatest Asset

TO GIVE the service that your customers expect and are entitled to receive, it is essential that every department head in your organization have an intimate knowledge of modern warehousing.

This knowledge can best be imparted to the various men in your organization by having them read **DISTRIBUTION & WAREHOUSING** each month.

On the subscription list of **DISTRIBUTION & WAREHOUSING** are many prominent terminal, warehouse, manufacturing and transportation companies who receive regularly several copies of each issue for their general executives, traffic managers and other department heads.

The subscription price is only \$2.00 per year (\$2.50 west of the Mississippi). Dictate the letter now, giving us the names and addresses of the men in your company who should be receiving this publication each month.

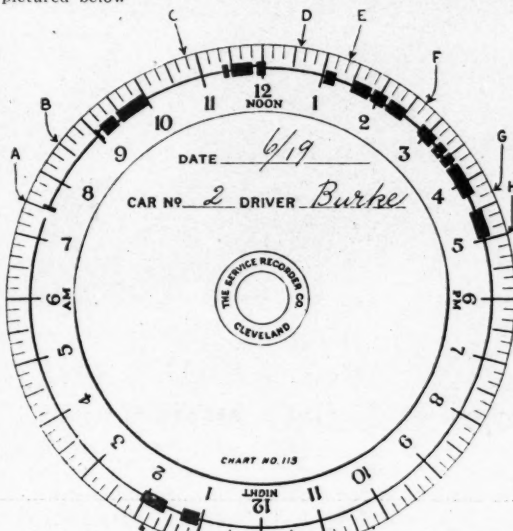
DISTRIBUTION & WAREHOUSING

239 West 39th St.

New York, N. Y.

What's Your Truck Doing All Day?

Here are the facts of one day's operation—facts that the truck owner didn't have to "go out after," but facts which were brought to his desk on the Servis Recorder Chart pictured below



Daily Servis Recorder Chart (much reduced). Heavy mark shows when truck is in motion; narrow line shows truck standing still.

A—truck started at 7:30. F—held up 20 minutes (drawbridge).
B—hour and 25 minutes to load. G—stopped 15 minutes (somewhere on return trip. Ask about).
C—hour and 20 minutes (at freight depot). H—put up at garage at 5:00.
D—lunch hour. I—taken out during night.
E—fifteen minutes (loading).

Write for Booklet

THE SERVICE RECORDER COMPANY

710 Huron Road

Cleveland, Ohio



1000 cases where 250 stood before

A gang of huskies would have to do considerable juggling to boost cases weighing 1500 or 1800 pounds off the floor. In this warehouse cases weighing that much reached the first tier only, until the REVOLVATOR came. With it two men do the piling and find room for 1000 cases where 250 was the capacity before.

One man can take a REVOLVATOR any place. It is the "Steel Giant" that piles to the ceiling. Made in six styles of revolving and non-revolving types, operated by hand, motor, and combination hand and motor. Bulletin T-50 tells more.

REVOLVATOR CO.

Sales Agents for N. Y. Revolving Portable Elevator Company
389 Garfield Ave., Jersey City, N. J.

2015-V

**BREEN'S
PIANO DERRICK**
What Everybody Needs

PIANO MOVERS find that the hoisting and lowering of pianos is made easy, safe and economical by the use of this practical, adjustable Window Derrick. Handy to carry, easily put in place by one man, always ready and quickly utilized.

It is a practical patented invention, which has been in use for twelve years and has demonstrated its value beyond question. It clamps to window. There is also a swing under bar which is placed under outer end of piano and carries it in or out.

Every mover of safes, pianos or heavy merchandise needs Breen's Piano Derrick because it saves the strength of the men, means a tremendous saving of time, and obviates jams and scratches. Several firms have taken out third story window, set the derrick in place, hoisted piano, and replaced window in 25 minutes.

Also manufacturers of Belts and Bars to hoist Pianos and Ropes, Blocks and Piano Covers.

Write to-day. Catalogue for the asking.

WM. H. BREEN
219-231 Rutherford Ave., Charlestown, Mass.

Standard
DETROIT
USA



STANDARDIZING with STANDARDS

The Fulton Transfer and Storage Company of Atlanta, Georgia, is so well able to meet local Shipping Emergencies — not only because Fulton has twenty-four Motor Trucks—

—but because they are STANDARDS.

The STANDARD Product embraces a Farm Special and Complete Line of Standardized Quality Trucks.

**STANDARD MOTOR
TRUCK CO., Detroit**

Standard
REGISTERED
MADE IN
DETROIT
USA
MOTOR TRUCKS

**Also Means a Good
Investment**

"All the name implies"

GHOSTS of OTHER DAYS



USING SPACE FROM THE CEILING DOWN

Use the wasted space near the ceiling. Put the extra men released at more profitable work. Accomplish both by installing this Portable AF Piler and Stacker, motor operated, mounted on wheels. Units for all requirements. Machines in stock. Ask to-day.

The Alvey-Ferguson Co., Inc.
Cincinnati



"Good-by Strong Arm Methods" Says the Superintendent

THE old way required a gang taken away from other work. The Yale Spur-gear Chain Block, and one man, now do the hoisting Quicker, Safer, and with Economy.

Yale Chain Blocks help solve production problems, eliminating slow, dangerous "strong arm" methods that decrease output.

Executives responsible for plant production, economy and safety will find constructive information in the new Yale Chain Block Catalog. Send for it.

"From Hook-to-Hook-a-line-of-Steel"

For a Factory Locking Equipment
Use a Yale Master - Key System

The Yale & Towne Mfg. Co.

Makers of the Yale Locks

Stamford

Connecticut

YALE

WAREHOUSE EQUIPMENT

WE MEET YOUR REQUIREMENTS

IN

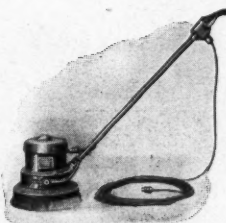
Furniture Pads, Canvas Covers, Piano Covers (for shipping and storage), Tar-paulins, Truck, Wagon, Horse and Talking Machine Covers.

SAXOLIN Duplex is a flexible packing, wrapping and case-lining material. Better than burlap because it is Vermin-proof, Water-proof and costs less.

Write Us Your Requirements
So We May Quote You Prices

The Cleveland-Akron Bag Co.
Cleveland, Ohio

For Carpet Cleaning



THE NEW IMPROVED CONNERSVILLE SCRUBBING MACHINE

Shampooed rugs are thoroughly clean. The new Connersville scrubbing machine is expressly designed for carpet cleaning. It is of the correct weight and construction to completely remove all dirt and grime without injuring the finest rugs.

When you use a Connersville vacuum cleaner to pick up the suds and water after shampooing you have a real money making team. The drudgery of hand work is done away with. You can do faster and more uniform cleaning. The same amount of help will turn out many times more work.

Write for literature and full information.

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United Vacuum Appliance Division
Dept. I.
CONNERSVILLE INDIANA

GARFORD



The real value of any truck to you is based on its *Low Cost Ton-Mile* in your kind of hauling. We have actual figures showing 97.6% of Garford users are 100% satisfied. You don't have to experiment with a Garford—you *KNOW*.

Lodi, N. J., Oct. 13th, 1919
The Garford Motor Truck Co.,
Lima, Ohio

Gentlemen:—
The following is the record of my Garford motor trucks:

Capacity—2 tons	Years of Service—2½
Average Miles Gal. Gas—10	
Repairs—\$60.00	Total Mileage—35,000

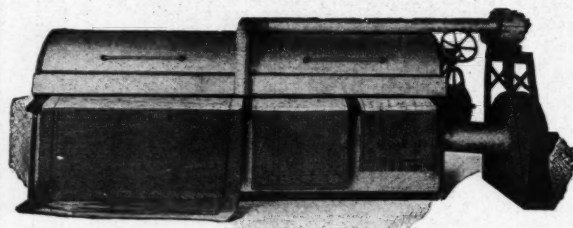
Working as good as new and doing the same work yet and it will do the same work for 2½ more years.
(Signed) JOS. SANTORA

Lima, Ohio

That the United States Army has made Garford a Class A Standard is another proof of Garford serviceability.

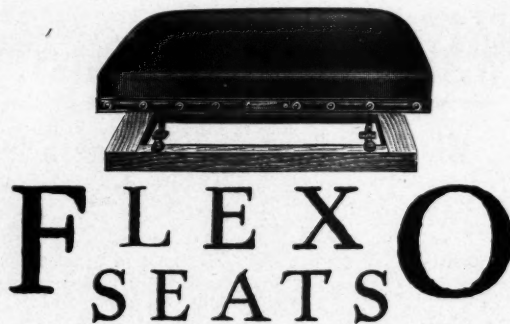
TRUCKS

Because there is
Big Money in It
storage and warehouse
companies are installing
this big rug cleaning
machine

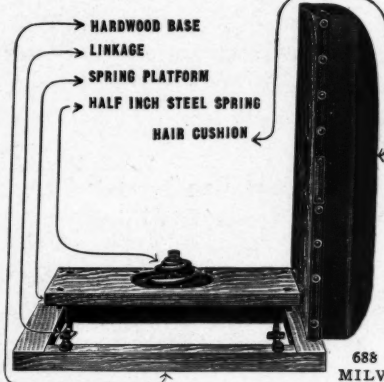


The most perfect Rug Cleaner made

The Cleveland Laundry Machinery Mfg. Co.
CLEVELAND, O.



The unusual durability and comfort of Flexo Seats are due to exclusive features that make them the most economical.



We guarantee them, for five years. When you buy a truck, specify the seat that wears longest and eliminates backache and kidney affection — Flexo Seats. If you operate trucks have Flexo Seats installed today.

THE FLEXO SEAT CO.

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CONVEYORS FOR EVERY PURPOSE GIFFORD-WOOD CONVEYORS

Are Speeding-up Production

Their use has been introduced in an endless variety of industries—and in every case their time-saving performances have meant greater output. In loading and unloading and in dispatching bulk materials they are everywhere giving absolute satisfaction.



We Design and Build
Elevators—Conveyors
Power Plant Coal Handling Equipment
Coal Pockets
Locomotive Coaling Stations
Wagon Loaders
Bagging Loaders
End Thrust and Straight Faced
Holsts
Screens—Chutes
Buckets
Chain

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Established 1814

Gifford-Wood Co.

Main Office and Works: HUDSON, N. Y.

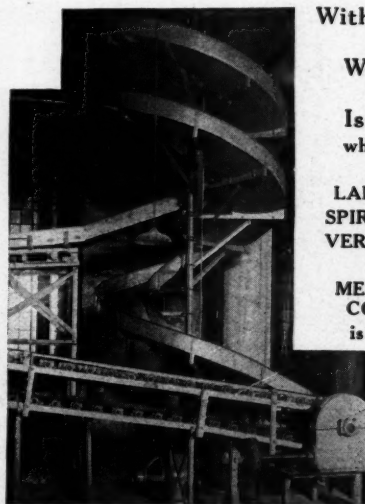
NEW YORK

BOSTON

CHICAGO

BUFFALO

With Help Scarce
AND
Wages High
NOW
Is the Time
when the need
for our
**LABOR-SAVING
SPIRAL CHUTES
VERTICAL LIFTS
AND
MERCHANDISE
CONVEYORS**
is imperative



Owned by
The Haslett
Warehouse
Co., of San
Francisco,
the development of
handling

problems in our own fourteen general merchandise storehouses has enabled us to give practical advice to warehouse and terminal concerns. We are at your service.

Through long experience we have learned how to combine every form of merchandise conveyor so as to obtain the most practical results.

When no standard form of conveyor is adequate, we design special machines.

When you want information on conveyors, write us. We can help you.

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Southern Office: 523 Calvert Bldg., Baltimore, Md.
Pacific Coast: 228 Pine St., San Francisco, Cal.

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for
IMMEDIATE DELIVERY

Two No. 25 Double Drum Whips with 20-hp. motors, 220 volts, 2 phase, 60 cycles. Rated from 1 to 1800 lb. capacity at 300 feet per minute.

Price, \$2,200 each. Price includes hoisting and operating ropes, and sheaves, with carrier block. This doubles the load and reduces the speed one-half, or—the Regular Lockport Block.

This machine will hoist on both sides of the building, and by using our 36" turning sheave, one rope can be run at any angle to the other.

Six No. 15 Single Whips with 15-hp. motors, 220 volts, 2 phase, 60 cycles. Rated from 1 to 1800 lb. capacity at 300 ft. per minute. Otherwise same as the No. 25.

Price, \$1,260 each.

One No. 15 Single Whip with 15-hp. motor, 550 volts, 3 phase, 60 cycle.

Price, \$1,260.

No. 15 prices include hoisting and operating ropes, etc., as No. 25.

Orders accepted subject to prior sale and are f.o.b. Providence, R. I.

VOLNEY W. MASON & CO., INC.

Providence

Rhode Island

GET OUR LIST OF USERS



Save
Time
and
Labor
Sawing
Boxing
and
Crating
Lumber

This neat, compact saw can be hung up against any convenient wall or column, thus taking up no valuable floor space.

The Reliance MOTOR DRIVEN Swing Saw

will save the time and energy of hand cutting—do the work much better and faster—and, being self contained, can be placed anywhere, regardless of power supply.

Easily installed by anybody. Direct or alternating motor. Built in three sizes, to accommodate any class of work. Tell us your requirements and we will submit proposals.

Reno-Kaetker Electric Co.
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CINCINNATI, OHIO

YOUR COMPETITOR HAS ONE

WALKER ELECTRIC TRUCKS



Another Satisfied Walker User in New York

ECONOMY

Do not forget that the *real cost* of any trucking equipment is the *expense of using it*.

Many Prominent Users of both Walker Electric and gasoline trucks have reported their gas trucks costing from 50 to 100 per cent more than their Walkers, doing the same work.

Need there be further explanation why about 80% of "Walker orders" still remain as "repeat orders" from satisfied users?

Our branches and dealers will gladly tell you about the extreme fitness of the Walker in distribution, warehousing and kindred industries.



The Walker Drive utilizes over 95% of the energy.

WALKER VEHICLE CO.

Manufacturer of Highest Grade Electric Road Trucks and Tractors

CHICAGO

Poston New York Philadelphia

LOWEST-TRUCKING-COST



Save Money, Time and Labor by Using

"THE HOLYOKE" Transfer Truck

One Man and this truck performs the work of Four Men.

Various models to suit every variety of work.

All strongly built and sold under a liberal guarantee

Write for Circular B-1

Holyoke Truck Company

Main Office and Factory
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Export Department:
77 Broad Street, New York City



20% Feed Bill Saver

This means if at present you are feeding 4 qts. to each horse per meal, by feeding crushed oats you save 2.4 qts. The yearly saving is 27 bushels, and figuring oats at 55 cents per bushel means \$15.00 saved on each horse. Just multiply this on each horse you have.

Crushed oats produce bone and muscle and keep horses in better working trim with more staying power, because Crushed Oats gain over whole oats from 15 to 25 per cent in nutriment.

The National is the most economical crusher to do this work—the power consumed costing about 10 cents per horse per month. It frees the food from foreign particles. This crusher will crack corn at the time it's crushing oats. Write for our money-saving booklet on crushed oats feeding—it's free. Write now.

National Oat and Corn Crusher

made by Excel Mfg. Co., Pottersville, N. J.

Established 1875

Canvas Covers

For Wagons and Trucks

COVERS and TARPAULINS for All Purposes

Awnings, Tents, Flags, Spray Hoods, Yacht Sails, Boat Covers, Mill Aprons, Canvas Bags

L. NICKERSON

173 STATE ST., CORNER COMMERCIAL
BOSTON, MASS.

SAFETY

Columbia Elevator Gate

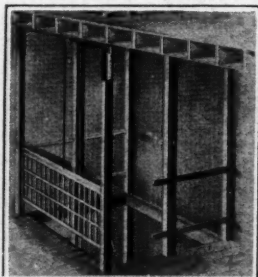
Reduces Your Liability

The Columbia Semi-Automatic Gate is without question the most practicable and reliable self-closing elevator gate made—and reduces employers' liability. It is simple in operation and durable in construction.

The gate is carefully counterweighted and can easily be raised by hand—but closes instantly when the elevator leaves the floor level. The Columbia Gate can be used in connection with any kind of elevator.

Let us submit estimates on your particular elevator gate problem. Prices and detailed drawings on request.

Richmond Safety
Gate Company
Richmond
Indiana



BUCKIN FURNITURE PADS

Strong Khaki Canvas, Stitched Both Ways

18 x 72 36 x 72 54 x 72 72 x 72

THE N. Y. TENT & TARPAULIN CO.

Successors to Tent Dept. of Foster & Stewart Co.

388 ATLANTIC AVE.

BROOKLYN

Distribution & Warehousing

is the

Connecting Link

between the

Shipper and the Warehouseman

It serves each to the benefit of both.

Many big, nationally known business houses subscribe for several copies each so that all the men who handle their distribution and shipping may benefit by reading it regularly. It costs but \$2.00 a year (\$2.50 west of the Mississippi).

Distribution & Warehousing

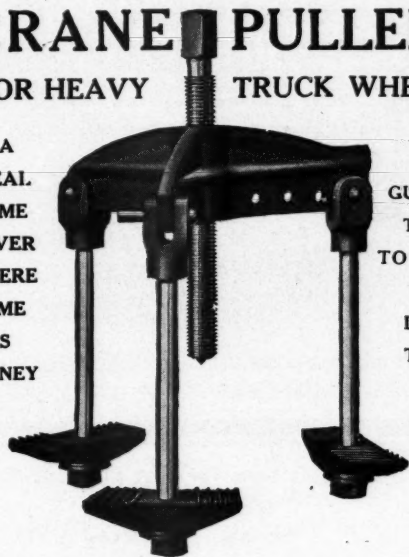
239 West 39th Street

New York

CRANE PULLER

FOR HEAVY TRUCK WHEELS

A
REAL
TIME
SAVER
WHERE
TIME
IS
MONEY



GUARAN-
TEED
TO LAST
A
LIFE-
TIME

ONE Man can remove the heaviest Gas or Electric Truck Wheel in 15 Minutes with this PULLER.

Write for Catalog Z

ORDER FROM YOUR JOBBER

CRANE PULLER COMPANY

54 Lake St.

Arlington, Mass.

EXCELSIOR PACKING PADS ARE LIKE INSURANCE

YOU pay only a small premium charge for the best protection obtainable. Don't think of them as an expense, consider the loss and inconvenience of claims for damage and the satisfaction of knowing that anything you ship will reach its destination exactly as it left your hands. You will incur no obligation by getting our samples and prices.

H. W. SELLE & CO.

Manufacturers

1000-1016 N. Halsted St., CHICAGO, ILL.

ARCHITECTURAL SERVICE



Cold Storage Warehouse
S. Miller Fruit Co., Marshfield, Wis.

A COLD STORAGE WAREHOUSE is a COLD proposition—so is any warehouse when considered in the light of COLD FACTS.

When contemplating new buildings or extensions of present plants, secure the advice and services of a competent organization, whose experience enables them to analyze the peculiar aspects of the problem at hand and to recommend the most ADEQUATE, and therefore the most ECONOMICAL solution.

We furnish complete service, plans and specifications for up-to-date practical warehouses.

CARPENTER & WELDON

30 N. LA SALLE ST., CHICAGO

This CANTON PORTABLE CRANE Has the Fairbanks O. K.

The
Handiest
Tool in
The
Shop



Because it is built to a quality standard—not to a price. It has the O. K. of every user, not only because of its strong construction, but because one crane lifts and moves the heavy, awkward pieces that formerly wore out six men in handling—and does it in less time.

Its extra strong base casting, projecting arms and gears are made from a mixture of cast iron and steel

—carefully finished and well fitted by expert mechanics. It is tested and guaranteed to safely lift its rated load. And they are made in sizes that fit the needs of any warehouse.

Let a Canton Crane take the load off the men and make one man's time worth six. Get our free booklet containing money saving ideas for warehouse owners—get the particulars—write for them now.

The Canton Foundry & Machine Co.
CANTON OHIO

Permanent Exhibit Salesroom,
Grand Central Palace, New York

G. W. Jones Lumber Co.

807 Lumber Exchange Building
CHICAGO

Manufacturers of
CRATING AND BOXING LUMBER OF ALL KINDS

We refer you to the leading warehouses in Chicago as to the quality of stock we ship.

Wholesale Prices

Stock Guaranteed

Renew the Power and Life of
Your Engine

by having the

Cylinders Reground

and equipped with new

Pistons—Piston Pins—Piston Rings

by the

Butler Manufacturing Co.

1124 E. Georgia St., Indianapolis, Ind.

Cracked Water
Jackets and
Cylinders

Permanently repaired at
great saving of time
and expense with

**Peters' Metallic
Filler**

A low metal compound,
melting at 300°F. No
risk of warping or dis-
torting the casting.

Many repairs can be made without dismantling motor.

Price \$5.50 per lb.

Write for booklet "Information for the Expert Mechanic"—
sent free.

Aluminum Brazing-Solder Company

Widener Building

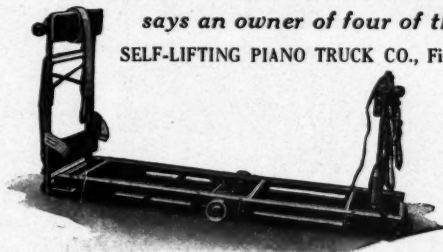
Philadelphia, Penna.



A TRIUMPH is your BUCKEYE SILL PIANO TRUCK

says an owner of four of them

SELF-LIFTING PIANO TRUCK CO., Findlay, O.



End
Truck
Covers

Straps

1½, 2, 3½ and 5 Ton WORM DRIVE Models

Write for full information

SELDEN TRUCK CORPORATION
ROCHESTER, N. Y., U. S. A.

Selden Motor Trucks

REGROUND BEARINGS

OUR REGRINDING PROPOSITION
WILL CUT DOWN YOUR BALL
BEARING BILLS. TRY US AND
BE CONVINCED. SATISFACTION

GUARANTEED

AHLBERG BEARING COMPANY

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BOSTON
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KANSAS CITY
LOS ANGELES
MINNEAPOLIS



NEW YORK
PHILADELPHIA
PITTSBURGH
PORTLAND, ORE.
PROVIDENCE
SAN FRANCISCO
ST. LOUIS - OHAMA



With This Seal You Get Bet-
ter Protection Than With
a Dozen Locks

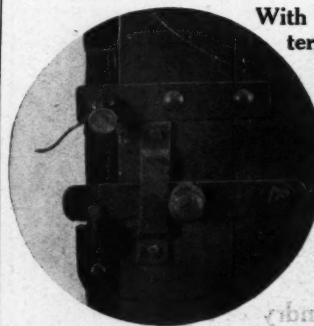
The Brooks Patented Tin-Bottom
Seal defies all efforts at tampering.
Unlike the finest lock, it cannot
be "picked." Patrons are guaran-
teed protection to their goods stored
in warehouses using Brooks seals.
Warehouses using Brooks Seals are
free from complaints. The unbro-
ken seal, its number being verified,
leaves no doubt that any package,
trunk, or container is as originally
sealed.

We produce metal strip seals for
use in the same or variety of other
uses. Let us know your needs.
Write us for quotations.

Baystate Storage Warehouse Co. of Springfield, Mass., is one of our users.

E. J. BROOKS AND COMPANY,
227-229 Fulton St., New York City

STORAGE SEALS



THE SUBSCRIPTION PRICE OF

Distribution & Warehousing

IS

\$2.00 A YEAR

(\$2.50 WEST OF THE MISSISSIPPI)

The Warehouseman who does not find
ideas and suggestions in any one issue
which will make or save him a hun-
dred times that amount is either ready
for the millennium or is not looking
for opportunities.



If you don't find what you want here, your advertisement here will find it for you.

This Exchange section serves a real purpose in the industry by affording a central market place for the disposing of equipment no longer needed, and the securing of special apparatus at bargain prices. If you have any equipment for sale or wish to sell your business, this section is the logical place to advertise. All advertisements in this section will be accepted at a flat rate of three cents per word for each insertion.

FOR SALE.—Part interest or the entire established storage and moving business in Newark, N. J. Good opportunity for party who will take an active interest in the business. Address Box 565, DISTRIBUTION & WAREHOUSING, 239 West 39th St., New York, N. Y.

TRANSFER AND STORAGE.—Complete equipment, well established and paying. Will stand investigation. Will sell one or four trucks and business. Other business compels owner to sell. For particulars, address P. O. Box 1138, Tulsa, Okla.

EXECUTIVE POSITION in an organization engaged in warehousing and distributing is wanted by a man recently separated from the military service, who was in charge of the warehousing and distributing organization of one of the largest Government Supply Depots, and is experienced in the modern methods of warehousing, distribution and traffic. Particularly desire connections with concerns acting as storage and distributing agents for manufacturers. Details and references will be furnished those interested in a "Producer of Results," care of DISTRIBUTION & WAREHOUSING, 239 West 39th St., New York City.

FOR SALE.—Old established transfer and storage business (warehouse, motor trucks, teams and other equipment) in a city having a population of nearly 15,000, located in Western Pennsylvania. We do 90% of the transfer and storage business in the city. Owner's health, reason for selling. Address Box 00, care of Transfer and Storage, 239 West 39th St., New York.

WANTED.—A man with trucking and shipping experience for position as Assistant Manager or Superintendent with a storage warehouse concern. Address P. O. Box 135, DISTRIBUTION & WAREHOUSING.

WE WANT TO SPEND \$25,000 CASH for unclaimed merchandise left in storage. We will buy for spot cash. Novelties of all kinds, household specialties, toys, knick-knacks, books, post cards, jewelry, pictures, patented articles, "fool" inventions. Anything of which there is a large quantity. Send sample and say how many you have. Our spot cash offer by return. Address Fantus Brothers, 525 So. Dearborn St., Chicago, Ill.

RECOOPERING THE SIGNODE WAY

Saves Time, Labor and Material Cost.

Hundred Million Boxes, Bales and Bundles have been Strapped, Sealed and Shipped the Signode Way.

Full Information by Return Mail

SIGNODE

SYSTEM INC.

564 W. ADAMS ST., CHICAGO

BOSTON NEW YORK PHILADELPHIA SAN FRANCISCO
ATLANTA TORONTO

FURNITURE PADS

Made of Durable Colored Canvas

STOCK SIZES:

36" x 72" 50" x 72" 75" x 72"

Burlap, Waterproof Tarpaulins, Bags, Etc.

FULTON BAG & COTTON MILLS, Inc.

330 WYTHE AVE., BROOKLYN, N. Y.

ESTAB. 1870. Phone: Greenpoint 4200

More efficient—less expensive—better distribution than elevators. Anybody can operate them—any time—day or night.

VOLNEY W. MASON & CO.

INC.

Established 1860 Telephone, Gaspee 1211 Incorporated 1902
PROVIDENCE, R. I., U. S. A.

D. P. Kaercher, 76 Summer St., Boston, Mass.

Patent Whip Hoists

MOTOR OR BELT DRIVEN

"In use at—"
Terminal Warehouse Co., Prov., R.I.
National Dock & Storage Co., East Boston, Mass.
New York Dock Co., Brooklyn, N. Y.
Crimmins & Peirce, Boston, Mass.
New Bedford Storage Warehouse Co., New Bedford, Mass.
Borden Condensed Milk Co., New York City.
Eddystone Mfg. Co., Phila., Pa.
Jamestown Worsted Mills, Jamestown, N. Y.

For Mills, Docks, Cotton and Woolen Warehouses, etc.

EXPRESS SERVICE—200-400 feet per minute

SEVERAL THOUSAND IN USE

FRICTION PULLEYS AND CLUTCHES

It Will Pay To Look Into This



Any ? Will Receive Prompt Reply

Size No. 15

1500 lb. Whip in Pent House of The Charles River Stores, Beverly St., Boston, Mass.
Sizes—500 lb., 1000 lb., 1500 lb., 2000 lb.



The Jaqua-Detroit Phonograph Cover

made by

Detroit Canvas Manufacturing Company

This Jaqua-Detroit phonograph cover, made in two sizes, No. 1 small, No. 2 large, is a heavy brown canvas cover, padded, quilted and heavily fleece lined. It has shoulder straps and under straps so one man can easily carry the machine when covered. There is a special flap at the top, with a grommet, for shipping tag.

Other Jaqua-Detroit products include:

- Water proof storm covers for horses and wagons,
- Auto truck radiator and hood covers,
- Fleece lined piano covers,
- Table top pads,
- Furniture and van pads.

The Jaqua-Detroit furniture pad is a particularly economical buy at the present quotation, \$34 a dozen. Of heavy cream color drilling, sewed in squares from the center. These 60" x 72" pads will give long service and ample protection—a good buy at any time, a better buy now at this price.

Practical ideas, high quality of materials, skilled workmanship and modern manufacturing facilities are combined by the Detroit Canvas Manufacturing Company to make unexcelled products. We solicit the opportunity to demonstrate to buyers in the transfer and storage industry the money-saving ideas and practical utility built into Jaqua-Detroit goods.

Detroit Canvas Mfg. Company

245-247 Larned St., East

Detroit, Mich.

J A Q U A - D E T R O I T
P H O N O G R A P H C O V E R

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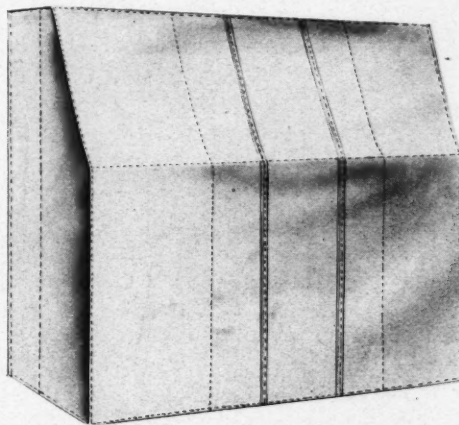
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FLEECE LINED PIANO COVERS, SPECIAL \$14.00

Furniture Loading Pads

TABLE TOP COVERS
VICTROLA COVERS
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5,000 Miles — No Repairs!

DIAMOND T

"The Nation's Freight Car"

That record was made by a Diamond T Truck, on road construction for the Canadian Provincial Government—on Vancouver Island, near Victoria.

It was gruelling service—under a steam shovel, with a 10-mile, day-and-night haul over bad roads and precipitous grades.

Diamond T averaged on that job eight miles to a gallon of gasoline; 150 to 200 miles to a quart of oil. The tires were apparently still good for 10,000 miles of similar service.

Diamond T established and held the record for actual ten-mile efficiency—80 tons of material per day

moved over that 10-mile course. It hauled seven full loads to every five hauled by any other truck on the job.

One of the hills showed a 25% grade (estimated). Diamond T made it in second speed. The others had to go into low. One even had to turn and crawl up in reverse.

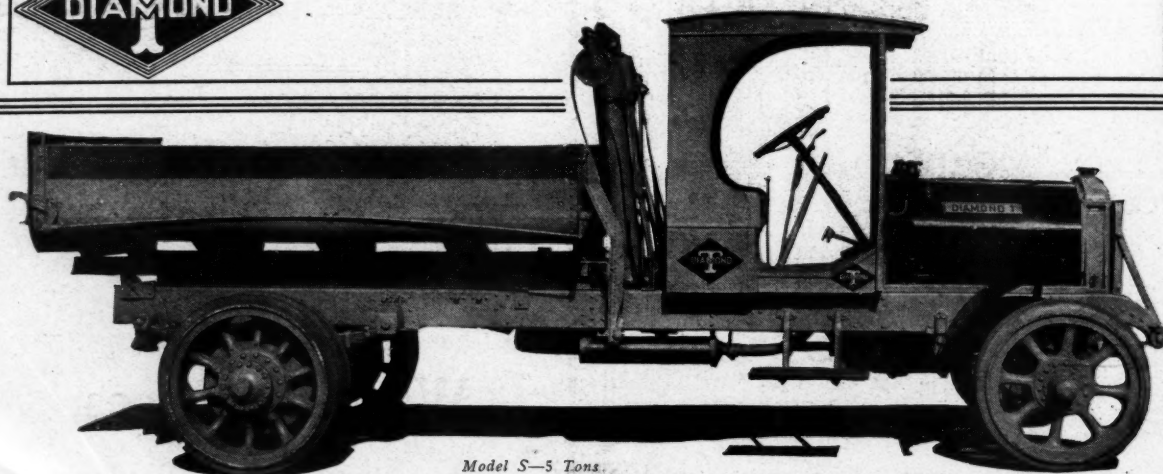
And not one cent spent for repairs!

A remarkable record, that. And yet it is merely indicative of the unusual service rendered by Diamond T Trucks all over the globe, under all service conditions, throughout the past nine years. Diamond T owners know from experience that remarkable records are typical of their trucks—so much to be expected that the unusual has become commonplace.

We could tell of scores of instances besides which the one above would seem no more than ordinary. They prove that Diamond T trucks deliver maximum efficiency, lowest-final-cost. If you buy transportation on this basis, you will want to know more about Diamond T—why and how it has earned the title, "The Nation's Freight Car." A request for information will put you under no obligation.

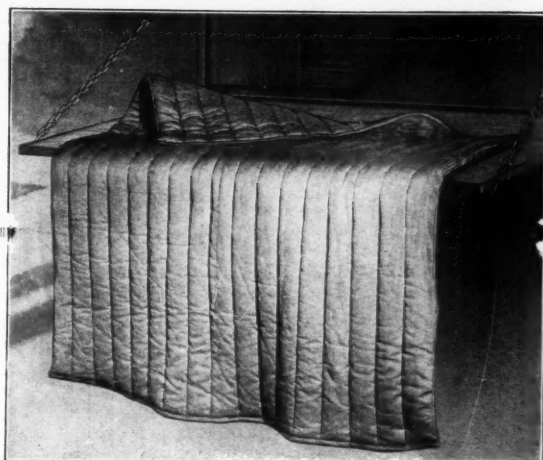


DIAMOND T MOTOR CAR CO.
4558 West 26th St. Chicago, Ill.



Model S—5 Tons.

Khaki
Brown



Better
Service

Ready Right Now

MAISH QUALITY WAGON PADS

*You Need Them for Safe Deliveries
By Truck or Wagon—Will Ship Today*

Why take chances of dissatisfying customers with goods marred after it leaves your floors in perfect condition? Avoid breakage, scratching and rubbing by protecting your wares against rough handling and jolts during delivery on wagons and trucks.

Maish Quality Wagon Pads are soft and smooth, yet substantial and wear-resisting. We are using our new heavier grade of Khaki Brown covering for maximum service to you.

The filling in Maish Quality Wagon Pads is an extra thick one-piece layer of cotton (no shoddy). Quilting in close rows of stitching with heavy carpet thread. Edges are bound by our own special process, protecting every seam and making ripping impossible.

We ship Maish Quality Wagon Pads with the definite understanding that if you are not fully satisfied, you may return them at our expense.

The prices quoted are for standard sizes ready for immediate delivery, limited strictly to stock on hand and subject to change without notice. We ship on the day we get your letter or wire.

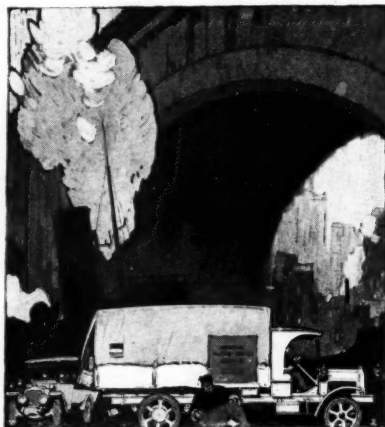
Prices F. O. B. Cincinnati:

No. 10 Cut Size, 36x72	Each \$2.25
No. 20 Cut Size, 54x72	Each \$3.15
No. 30 Cut Size, 72x80	Each \$4.40

THE CHAS. A. MAISH CO.

Makers of the world-famous Maish Comforts

Cincinnati, O.
1129 Bank Street



FIRST *in* Motor Transport

MORE than 5000 White Trucks are used by concerns whose sole business is motor truck transportation. They are operated on established routes—express, freight, passenger—in every part of the country.

In many cities White Trucks are the backbone of the largest motor transport fleets. To farms and villages, to mining and lumber camps and oil fields, White Trucks bring rapid transit and quick communication. In our great National Parks they are the standard equipment for passenger and freight service.

In this service, the mettle of a truck shows unmistakably. Steady operation on exacting schedules, over all

kinds of roads in all kinds of weather, is an acid test of endurance. The trucks' *earning power* is the only source of income. Every cent of operating cost is a direct charge against profits. None but the best trucks can do the work; only the most economical can *pay*.

Owners in this field emphasize the "on time" dependability of White Trucks under all conditions, and their low cost of operation year after year. Mileage records are frequent, citing 100,000 to 300,000 miles, the trucks still doing a full day's work. White Trucks go on working and *earning* long after the investment has been charged off the books. They "do the most work for the least money."

The following are some of the representative concerns who operate large White fleets in motor transport service. These fifty companies own a total of more than 1500 White Trucks.

American Railway Express Co.
A. L. Ammen Transportation Co.
Akron Storage & Contracting Co.
Anchor Cartage Co.
Atlanta Baggage & Cab Co.
Baltimore Transit Co.
Black & White and Town Taxis
Boulevard Transportation Co.
Canton Storage & Transfer Co.
Cleveland-Akron Bus Line Co.
Cleveland Transfer Co.
Club Cab Corporation
Columbus Transfer Co.
Emerick Motor Bus Co.
Owen H. Fay Livery Co.
Fenway Garage Co.
Glacier Park Transportation Co.

Kennicott-Patterson Transfer Co.
A. C. Marshall Co.
Mesaba Transportation Co.
C. W. Miller Transfer Co.
H. W. Mollenauer & Brother
Motor Terminals Co.
Municipal Railway
Omaha Taxicab Co.
Frank Parmelee Co.
Peninsula Rapid Transit Co.
Pikes Peak Auto Co.
Progressive Transfer Co.
Pullman Taxicab Service Co.
Quaker City Cab Co.
P. Reardon, Inc.
Rocky Mountain Parks Transp. Co.

Salt Lake Transportation Co.
San Francisco Drayage Co.
Dennis Sheen Transfer Co.
Smith & Hicks, Inc.
Stewart Taxi Service Co.
Tacoma Transit Co.
Terminal Taxicab Co.
Twin City Motor Bus Co.
Union Transfer Co.
White Bus Line, Inc.
White Star Auto Line
White Taxicab Co.
White Transit Co., Inc.
Western Auto Stage Co.
Yellowstone Park Transp. Co.
Yosemite National Park Co.
Zumstein Taxicab Co.

THE WHITE COMPANY, *Cleveland*